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ABSTRACT

Based on literature research and personal experiences gained in Africa, this book pays attention to the cultural and educational aspects of communication for development in developing countries. The book addresses the many pitfalls of communication and the factors that have an influence on the effectiveness of communication. The first part of the book provides an overview of the changes of development strategies in the last few decades and describes the practice of communication for development in the field. The second part of the book discusses the intricate link between communication and culture and the way it influences the practice of interpersonal and mediated communication. Part three deals with media and their educational potential. The fourth part of the book pays attention to the steps involved in the planning and implementation/production of communication events, programs, and materials. The fourth part of the book pays special attention to the importance of pre-testing, monitoring, and evaluation in this process. A 25-item dictionary of concepts and a bibliography containing about 200 items are attached. (RS)

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In other words…

the cultural dimension of communication for development

Ad Boeren

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I would like to dedicate this book to my late father, Sjef Boeren and to the late Marina Maspero, communication expert and gifted visual artist, with whom I had the privilege of working together in my first long-term assignment in Africa.

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Introduction

About a decade ago, I gave George May a ride, who, at that time, was a senior agricultural extension officer at the Nhlangano Farmer Training Centre in the South of Swaziland. When we were passing through the main street of Nhlangano he asked permission to lower the window. He had spotted some farmers from the area and wanted to take the opportunity to 'extend' information to them. I did not have to reduce speed, as he would shout the message to them. So we travelled through the busy street while George May leaned out of the window loudly reminding the farmers that it was time to plant SR52, or something of that order. Later on, when I recounted this experience to some of his colleagues, I was in for more surprising stories. They depicted George May as a powerful personality with an extraordinary and unique approach to extension. Gifted with an impressive posture and a powerful voice, he used to climb the highest hill in the area which he had picked for a field visit and shouted his extension message in all directions to the farmers working in the fields below. On days when the farmers came to the district town for shopping, he would position himself at the bus station, interrogating 'his' farmers before they entered the departing buses; he would ask them why they left without buying seeds or fertilizer as they had been advised to do (by him), and would send them off immediately to the nearest shop to rectify their 'negligence'. Despite this rather authoritarian approach, he was very much respected by the farmers. Maybe the fact that he was a leading figure in one of the many religious groups in the district was a contributing factor. In any case, the farmers readily followed his advice and instructions, and year after year, 'his' farmers won all the first prizes at the local agricultural shows.

My thoughts have gone back to George May many times, especially on occasions when I came across examples of extension programmes in which involvement of the people in decision-making was propagated, equality and dialogue in communication was stimulated, and collaboration with farmers on the basis of local needs and an esteem for traditional knowledge and practices was preached. George May did not do any of these things. He followed more old-fashioned extension strategies, trained as he was to promote modern agricultural practices which were expected to bring economic benefits to the farmers.

To some, May's methods of extension may have the appearance of 'development by coercion'. However, the impact he had on the farmers was not based on intimidation. He had authority, as a person and as a technical expert, because he was devoted to his job, because he took an interest in the wellbeing of 'his' farmers, and because he believed in what he was doing.

The success of May's so-called 'outmoded' extension methods and unconventional way of communicating with farmers is evidence of the fact that there are no indisputable rules for effective development strategies. On the one hand this may be confusing to those who are desperately searching for unambiguous recipes for success. Personally, I find it a comforting idea that there are 'many ways to win a war' and that, apparently, a personal touch can make a difference.

This book is about development in Third World countries, and especially about the role that communication can play in support of development programmes. Communication is used here in its most elementary and broadest meaning, i.e. the exchange of ideas between people. It includes interpersonal communication as well as communication conveyed via technological means. In practical terms, communication for development is concerned with sharing information through channels of education, extension, campaigns, training and community action. Information is exchanged between development workers and beneficiaries, between teachers and pupils, between community members themselves, between rural farmers and researchers or politicians. The aim of this information sharing, and that of development, is to improve the quality of life of people, in an economical, and a social as well as a human sense.

Agricultural extension, the field in which George May worked, is only one development sector in which communication plays a crucial role. It is equally important in all other forms of extension, adult education and training, ranging from literacy classes to primary health care, from agricultural demonstrations to radio forums.

Communication came to be accepted as one of the contributing factors of development in the 1960s. Over the years, its role concurred with the changing insights in development strategies. At first, communication was expected to pave the way for modernization. Next, communication was assigned the task of supporting specific development programmes and projects. Later on, the debate on involving the people in development programmes demanded an emphasis on dialogue and equitable forms of communication between the parties involved in the communication process. Interpersonal communication seemed more appropriate for this than one-way mediated communication.

As it appeared, however, interpersonal communication was not without its problems. Major barriers proved to exist between development agents and rural people which hampered a constructive sharing of knowledge and views. Foremost among these barriers were socio-cultural ones; development efforts were often undermined by incompatible communication approaches, by a clash of differing levels of education and literacy and differing use of language. Other important barriers were the divergent interests of the parties concerned and differing perceptions of the realities of a given situation (Balit 1988). It was clear that these barriers had to be levelled before any sharing of ideas could take place. It meant that more than ever before, the development agent and producer of communication materials had to take into account the social and cultural interests of the intended beneficiaries, and had to be sensitive to the cultural dimensions of development and communication. In fact, people's culture had to be mobilized to let development succeed, and communication for development needed to reinforce the cultural identity, local values, and knowledge of people as an avenue to their active participation (ibid.1988, 7).

Today, few scholars dispute the close relationship that exists between development, culture and communication. Development means change and it affects people in the way they look at things, the way they do things, the way they relate to each other and to the world that surrounds them. Changes take shape in the minds of the people affecting their knowledge, values, attitudes, perceptions etc. These changes cannot be brought about without the processing of information, either introduced from the outside (e.g. through education or training), through events and activities (experience), or by re-examining existing knowledge (reflection). Recognition of this fact immediately points at communication as a key factor in development processes. Without communication no information is shared between people, without interpretation of information no discoveries will be made, nor inventions take place.

Over the years, the insight was gained that communication for development is a social process with a strong educational undertone. It is not simply a way of disseminating innovations but a process of informing, creating awareness, challenging, teaching, instructing, discussing etc. Because of this educational perspective, the technologies and channels of communication are supposed to be subordinate to the educational context and educational requirements. In other words, the educational goals of the development programme (should) determine what sort of communication (content and form) is appropriate and needed. The fact that most development activities solicit rather than demand the collaboration of people creates special conditions for the educational approaches. Somehow people have to find the motivation and develop the interest to participate, to learn, to try out, to take the risk etc. Adult people cannot be forced to listen and to discuss if they do not feel like it. Hence, the major task of communication for development is to create favourable conditions for people to engage in a process of sharing ideas and learning.

A look at the practice of development communication in Third World countries shows that these insights have had a modest impact in the field. Although the need for communication support in development programmes is fairly widely accepted nowadays, successful use of communication strategies and media still seems to be the exception rather than the rule. There are not many examples of communication messages which are content-relevant, educationally sound, culturally appropriate and socially empowering. The reasons for this lack of success are manyfold and include the financial and technical problems which severely restrict many governments in their operations. Other reasons are of a political nature and account for paying lip-service to participatory development and cultural mobilization in order not to upset existing structures and national unity. And quite a number of reasons have to do with the capacities of the development agents, the development planners and media producers. They often lack the opportunity to acquire and develop the right attitudes, knowledge and skills to design and implement effective communication strategies and materials. In many cases, the training which they receive can be blamed for their concentration on the mastering of (scientific) subjects and techniques at the expense of human science subjects. They are trained to become subject-matter specialists and technicians, not educators or communicators.

This book pays attention to the cultural and educational aspects of communication for development in particular. It is partly based on literature research, and partly on personal experiences gained in communication projects in Africa. This explains the rather African bias of many examples in the text.

The many pitfalls of communication are discussed and attention is paid to the factors that have an influence on the effectiveness of communication. Crucial in this respect are the cultural conditions of communication, the psychological aspects of communication processes and the pedagogic requirements of adult education. It is hoped that the text will prove capable of portraying the nature and scope of these dimensions in a clarifying way. Aspects which need due consideration in the planning and implementation of a communication event are also dealt with, regardless of whether they concern a group meeting, a personal talk or a radio programme.

The book is not meant to be a manual or a guide, although it no doubt will contain ideas of practical relevance to some readers. It is more an account of a particular view on communication for development as a result of a personal learning process. It is hoped that the contents are of interest to a variety of readers. They include first of all students of communication, who may find the contents a useful introduction to the theory and practice of communication for development. The book may also be of interest to development agents, communication planners and material producers who would like to supplement their technical knowledge with some educational and cultural insights. Lastly,

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it may be interesting for communication scholars because it discusses communication for development from a cultural perspective.

The book is divided into four parts. The first part contains two chapters that describe the context of communication for development. An overview is provided of the changes of development strategies in the last few decades, and the effects these had on the utilization of communication approaches. The second chapter describes the practice of communication for development in the field, and, more specifically, the professional problems of an extension officer working in the rural areas of less developed countries.

The second part of the book discusses the intricate link between communication and culture and the way it influences the practice of interpersonal and mediated communication. Part three deals with media and their educational potential. It compares the appropriateness of various media in varying development contexts.

The fourth and last part pays attention to the steps involved in the planning and implementation/production of communication events, programmes and materials. Special attention is paid to the importance of pre-testing, monitoring and evaluation in this process.

Part I

Development

1.
Modernization and self-reliance

The key to progress and development

After World War II, most developing countries gained independence from their colonial masters, and schemes were designed to put the young nations on the road to development. There was little doubt about their destiny and mode of travel. Development strategies propagated economic growth, technical modernization and increased productivity which had brought prosperity to the Western nations as key instruments for transforming traditional or pre-modern societies into economies that resembled the advanced, democratic and stable nations of the Western world. The concept of development centred around the criterion of the rate of economic growth, and objectives of development were stated in economic terms. Capital, technology and education were the inputs, the processes were centrally planned and controlled, and the outputs were quantified in terms of gross national product (GNP) and per capita income (Blunt 1990:16).

Information technology gained recognition as a factor in the development process when Lerner published his book *The Passing of traditional society: modernizing the Middle East* in 1958. Although originally a study on radio listening behaviour, it had tremendous influence because it unveiled bright development horizons through the utilization of mass media. Lerner said that radio, television and print could serve as 'magic multipliers' by using them to disseminate information to large audiences. His message was taken up by Schramm (1964) who in his book, *Mass media and national development*, praised the capacity of the media to create instant development (Agunga 1993). It was believed that by 'injecting' new ideas into the masses people would start to empathize and identify with new roles and a changed and better way of life. Large-scale social change was required and to achieve this people had to be informed, persuaded, and educated. The free and adequate flow of information brought about by the expansion of the mass media would serve to enlist support for national policy, would raise aspirations, focus public attention on development needs, enforce social norms, and modify attitudes (Hartmann 1989:26). In a flash of excitement, development ministries, supported by donor agencies, rushed to embrace the mass media as development tools.

The magic role assigned to the mass media was put into a more sociological perspective by Rogers (1962). In his book *Diffusion of innovations* he presented his early theory about the diffusion of new ideas and practices as a crucial component of the modernization process. What was important about this theory was the realization that mass communications seldom suffice to produce direct changes of attitudes or behaviour. People are influenced in their decision-making by the people and groups they are in direct contact with. Furthermore, individuals are not equally exposed to the media, nor equally receptive to their messages. According to Rogers, the influence of mass communication seemed to work by way of a 'two-step flow' process; the better aware members of groups (and often those of high status) tended to be most readily reached by the media, and these 'influentials' or 'opinion leaders', in turn, were instrumental in spreading the message to others. Rogers concluded that the main function of mass communication in such situations was to create the awareness of a possible innovation among the audience, while the development of favourable attitudes and, finally, the adoption of the new practice depended mainly upon the response of influentials in the group.

Rogers' early theory became the paradigm upon which many of the extension and communication approaches used in the Third World - in fields such as family planning and agriculture - were modelled.

The results of the 'modernization/economic growth' strategies began to show in the 1970s and were rather disheartening: the poor countries had remained poor, or had become poorer, the Western World had grown richer, and the aid provided to the developing countries in terms of foreign capital, technology and loans soon became a burden rather than an asset (Blunt 1990:17). The development activities had rarely assisted the people who needed help most: i.e. the urban poor and peasant families. Socioeconomic gaps between urban elites and the rural poor had grown as a result of simply raising the average levels of income, formal schooling, and agricultural production.

The modernization theories, including that of Rogers, came in for severe criticism from academic circles as well as development practitioners. The criticism focused on: the simplistic argumentation which took insufficient account of the social and political dynamics of change; the lack of an adequate conception of the relationships between ideas and action, and those between culture and social structure; the top-down nature of development intervention, and the cultural insensitivity displayed in the methods and technologies. The 'human deficit' model that underpinned these theories had lost its credibility. Poverty could not be exclusively attributed to the ignorance and fatalism of the poor. Other factors played a role, like the powerlessness of the poor to alter the political and economic structures, and the lack of material resources (Hornik 1988:xi).

The assumption that new ideas could be 'injected' into the 'target audience' had proven to be a fallacy. Social change is not some sort of a mechanical process in which the individuals of the 'target audience' can take decisions independently. Instead, the social context of which they are a part strongly influences and determines their decisions about the adoption of new ideas. Experiences in various rural development projects made it necessary also to question the validity of the 'trickle-down' model of development. Information trickles down to some extent, but the process is slow and far from automatic. Informed people are selective in what they pass on and to whom, depending on patterns of interaction and social interests (Hartmann 1989:259).

The role of the mass media was also scrutinized. Although these media were claimed to have tremendous potential for the dissemination of information, in most developing countries this potential remained strictly theoretical. The actual reach of the mass media was severely hampered by financial and technological restraints, which limited their services to the urban, better situated and educated segments of society. Because of the high capital investments required the question was raised whether television, satellites and other expensive artefacts did indeed represent the best use of resources in poor countries, and whether they were the best means of reaching the population at large. The mass media made countries more indebted to the West in terms of capital, expertise and technology, and opened the door for unrestricted import of Western culture. It was feared that this 'cultural imperialism' would cultivate the perceptions and outlooks of Third World nations in ways which made them susceptible to further exploitation by international capital (Hartmann 1989:30). Instead, it was suggested that the use of simple, low-cost media might prove a better way forward, both from a financial and a cultural perspective.

Other points of criticism focused on the strictly top-down flow of information to the masses, and the tendency of governments to control the national media. This combination of government control and a one-way flow of information made mass media the perfect instruments for manipulation and even indoctrination.

The results of the modernization strategies made clear that the ideas and theories upon which the development programmes had been based were inadequate. The appropriateness of Western economics to Third World conditions had been uncritically assumed and the importance of social factors in economic development had been neglected. A new definition of development had to be formulated in other than macro-economic concepts, and development activities had to be brought more in line with the needs, aspirations and possibilities existing in the developing countries.

The alleviation of poverty

In the 1970s development came to be defined as progress towards the reduction and eventual elimination of poverty, illiteracy, diseases, malnutrition and social inequality. Meeting the basic needs of all people became the new priority of development programmes which increasingly focused on the 'poorest of the poor'. Development activities shifted from urban to rural areas and reflected a commitment to the transfer of agricultural technology for the purpose of increasing small-farm productivity (Blunt 1990:17).

In the Basic Needs Approach, communication was no longer seen as an intervention instrument that could induce change all by itself. The role of communication was reoriented towards rendering support to existing development programmes and projects. Development Support Communication, as it became known, was aimed at the improvement of the interaction between development personnel and the masses. Communication activities were integrated into multi-disciplinary development interventions, the use of media was diversified and the spectrum of communication channels broadened. The mass media came to support field operations with specific extension and training messages. The development agents were supplied with a variety of group media to facilitate their meetings with the target audience. These group media included tape-slides, sound-filmstrips, audio-cassettes, overhead projectors, flip charts, posters, pamphlets and leaflets.

The World Bank changed its lending policy dramatically to favour small farmer credit, health and education infrastructures, and to increase agricultural lending in general. This led to the 'Green Revolution' which was successful in a number of countries, particularly in South-East Asia. New agricultural technology was introduced and substantial increases in agricultural production were achieved.

Despite these successes, the BNA-approach was not successful in alleviating the poverty of the rural masses at large. For the great majority of the poor the rural development programmes brought no improvement of their living conditions, in fact, many became poorer and landless as the larger landowners reaped most of the benefits. The rural poor apparently lacked the opportunity to participate and the knowledge and skills to change their own powerlessness (Blunt 1990:18).

One of the major impediments was the influence of social structure and structural conflict on development. It had been assumed erroneously that people who live in rural areas constitute an amorphous mass, living in harmony and sharing the same interests. In reality, village society shows high differentiation in terms of access to resources, based on caste and other divisions, and characterized by competition for resources among different interest groups. The 'informed' and the 'haves' share their new knowledge and technology within a limited circle, and consequently the 'development gap' between the sections of the community widens (Hartmann 1989).

Problem solving and human development

From the moment the Basic Needs Approach was launched by the donor community other groups struggled to get more radical versions of the BNA-approach afoot. These radical approaches were characterized by a strong orientation on people and focused on empowering people to exert more influence on their own development. Most donor agencies regarded participation of the beneficiaries as a formalized process with limited popular involvement. Any connection between basic needs and such political issues as popular participation and redistribution of wealth was carefully avoided. In the programmes which they funded, participation usually meant a consultation with the poor about their needs, and a voluntary contribution of time and labour by the beneficiaries. Quite commonly, BNA-programmes involved the delivery of goods and services (e.g. clean water, housing, health care, irrigation schemes) which were assumed to correspond to the basic needs of the poor.

Based in part on the philosophies of Freire, Schumacher, Díaz Bordenave, Fuglesang, among others, the more radical approaches emphasized self-reliance, faith in people's ability to learn and change, and true people participation. The advocates of these approaches claimed that people are most knowledgeable about their own situation and conditions. Local people understand their own world better than any outsider could, including the experts who make policies and render advice. The locals are familiar with their roots, their history, their language, their culture and their values. That is where they have to find the reason for further development. Development should, therefore, be understood as the unfolding of what lies hidden within the person or the community. What others can do is, at best, create an environment that stimulates development. In other words: development can be nurtured, not generated (Kindo 1987:8).

Fostering people's potential and capacities should, therefore, be at the centre of development activities. While former development strategies stressed the importance of minimal levels of basic education and the acquisition of literacy and technical skills, the more radical approaches focused on learning and awareness-raising as means to identify and solve problems. 'Education for employment' was extended to 'education for self-reliance'. In this type of education, all educational activities (literacy, primary and vocational) were based on the daily realities and needs of the local people. It reflected the local culture as much as possible, and minimized the distinctions between school and community and between study and production (Wisner 1988:44).

Empowerment and self-management

Human development, self-reliance and participatory development are closely linked. If development implies that people should get the opportunity to shape their own development, it means that the targets or beneficiaries of development should have control over the planning and execution of development activities, as well as over the resources that are needed to implement these plans. In its most radical form this leads to participatory action programmes in which land reform, redistribution of assets and other necessary preconditions set the stage for the poor to take control of their own development (Wisner 1988:14-15). It addresses the causes of poverty and moves logically towards (political) group action.

In concepts of participatory development and self-reliance, communication is expected to stimulate and contribute to the process of empowerment. It has the role of making people aware of their situation and their own potential and to pave the way for concerted action. Priority is given to interpersonal communication channels and a horizontal flow of ideas as opposed to the vertical supply of information by the mass media. The use of local media is stimulated, because people are familiar with them, because they can help to strengthen cultural traditions, and because they can be managed by the people themselves. Empowerment of the people demands that the former target audiences of the mass media and extension services become actively involved in an exchange of ideas and information. They need to set the communication agenda, get access to communication media and become managers of communication processes.

Since the early eighties, many programmes have been launched which can be labelled 'participatory development projects' or 'bottom-up' approaches. These programmes bear characteristics of community participation, devolution of decision-making, integrated approach and appropriate formats of education. Many of these programmes stress raising awareness and 'conscientization' (enabling people to develop a critical understanding of reality) as the initial step in the development process. The projects propagate development that is essentially for, rather than with, the masses. But, active participation not only means sharing the benefits, it requires also mental and emotional involvement on the part of the participants, and not merely physical presence; it requires a willingness to contribute, and creative thinking and initiative, and an acceptance of responsibility (Awa 1998 cf. McClure 1988:5).

The non-governmental organizations especially embraced participatory strategies because of their focus on, and identification with, the fate of the (rural) poor. Very few government agencies came to adopt these strategies. The reasons for this are inherent in their tasks, structures and ways of operating. Government agencies often lack the political mandate, the organizational flexibility and collaborative spirit needed to help people according to their needs, if and when required by them, and to enable people to solve the problems which they themselves have identified.

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The results indicate that the participatory approach has a positive influence on the self-confidence and morale of the community members. Local people are ready, willing and able to innovate and adopt new methods, if they are given some amount of control over the process and if the approach is correct. However, the experiences also forces one to admit that it is easier to formulate the approach in theory than to implement it accordingly in practice. Projects in which communities are assisted in the realization of their plans show that the principles of participatory development need to be extended to the social fabric of the community itself. The story of the modernization approach repeats itself at the community level: as a result of participatory projects there is a widening gap between the less poor and the poorest of the poor. Also, small and poor communities are stratified and the less poor dominate decision-making and the management of the activities. The poorest strata of the community do not participate, nor do they share in the benefits according top their numbers and the gravity of their needs (Pongquan 1988; Boeren 1990).

Closing the circle

Although the war on poverty is still claimed to be a priority area in development programmes, since the mid 1980s, the strategies of donors have moved away from the basic needs ideology, and increasingly, have counted on the market economy to solve development problems. In documents of the World Bank, the basic needs terminology has begun to disappear and has been replaced by an emphasis on economic growth, efficiency and a much greater reliance on the private sector. The preoccupations with orthodox Western economics have returned - building on the best, creating an open economy and, above all, the 'magic of the marketplace'. In this view, increased productivity is the major justification for human development and development of 'human resources' through education is advocated for labour mobility within existing structures of employment (Wisner 1988:42-43).

Countries with failing economies and burdening debts are increasingly forced by the World Bank, International Monetary Fund and other donors to enforce austerity measures, economic adjustments and political reforms. The reforms include the decontrol of prices, removal of subsidies, currency devaluation and wage and hiring freezes. These measures hit the poor hard. Unemployment levels are rising, real incomes have fallen considerably, and the quality of services like education and health is dropping. Ministries are told to make their operations more efficient and much is expected of better internal management systems.

Over the years, governments have become more concerned about the human dimension of development, which is manifest mainly in words and not in action. More communication facilities and hardware have been obtained but not to the benefit of rural development. In most countries, governments have used, and still use, mass media for political propaganda, to serve and promote government policies, campaigns and commercial interests. The communication strategies have a clear top-bottom orientation meant to protect and reinforce existing power structures. Few governments in developing countries allow freedom of the press or encourage dialogue with the masses. Quite a few examples of projects can be quoted in which attempts have been made to use communication media to give the rural masses an opportunity to express their views and which, in the course of implementation, were hampered or forced to stop by the local government. "The fact is that governments in the developing world are so beset by problems that to open up a dialogue with their rural people in the interest of development would often seem to be a step that could only lead to further problems. It is easier to issue autocratic one-way commands and plan rural development in the comfort of the city than it is to communicate with rural people and plan with them. There is nothing more difficult than working with people" (Fraser 1983:10).

Donors and governments look with renewed interest at technology that can provide information and education to large audiences at a price they can afford. Distance education is expected to perform the miracle of increasing access to, and quality of, education and to upgrade the teaching force. This despite the less than convincing evidence provided by distance education experiences in developing countries, and the problems experienced with using mass media for rural development in the previous decades. Notwithstanding these lessons, the earlier simplistic assumptions about the relationship between communication and development have remained largely intact in many communication contexts in Third World countries. The temptation to regard the media as a way of reaching large numbers of people 'on the cheap' appears to be irresistible (Hartmann 1989:269).

This serves to show that the successive changes in development thinking have not led to a resolute abandonment or replacement of the earlier communication strategies. The newer strategies were simply added to the existing ones and were more prominent for as long as it lasted. Nowadays, in most developing countries, various communication strategies and media are used side by side. An observation that can be made is that in some sectors of development certain strategies and media are more dominant than others. In government circles, the top-down strategies remain largely unchallenged, while in non-governmental organizations preference is given to more participatory approaches to development and communication.

2.

In the field and out of touch

In the rural areas of developing countries, interpersonal contact is the preferred and often prime channel of communication. In regions where television sets are scarce, reception is poor and newspapers are not delivered, people talk about their lives and problems with people whom they can trust and with whom they can discuss matters. Even in areas where the media infrastructure is more developed, interpersonal contact still remains the preferred channel of communication. It is a type of exchange of ideas which is in line with the local traditions and way of life. Changes in ideas and behaviour do not happen instantly, except under compelling circumstances, but result from a process of discussing, testing and evaluating ideas and options with relatives, peers and friends. Interpersonal communication, therefore, is an indispensable element in the process of social change and development.

The development agent represents the interpersonal element of development programmes and projects. As such, he has a very important and responsible task in rural development[1]. People rely on him for their information, advice and instruction on development-related matters, varying from agricultural practices to ante-natal care. Development agents are the extension officers of various governmental agencies, development workers of NGOs, teachers and adult educators, barefoot doctors and primary health care workers. They are professionals or volunteers, employed by the government or selected by their community to be trained as a change agent. What they have in common is the fact that they are educators who, except for the teachers, educate in out-of school situations with adults as their audience. If the audience is receptive and cooperative, and if their work leads to positive results, the job is a very rewarding one. Whatever the results may be, development agents have a very demanding job which requires a lot of motivation and dedication. Judging from what is expected of them in terms of accomplishments, qualifications and personal characteristics one would expect them to earn a top salary. The opposite is true.

In this chapter, some of the problems the development worker faces in the execution of his job will be discussed. Attention is paid to the influence that training, organizational context and working conditions have on the effectiveness of the field worker. For the sake of clarity, the discussion focuses on only one category of development agents, the agricultural extension worker. In my view, the work situation of the agricultural extension worker and the problems he faces are fairly representative of those generally found in other development sectors.

Extension

Extension is an educational process which involves informing and teaching people and changing human behaviour through communication. It has operational as well as educational dimensions. It requires competent institutions and effective mechanisms both for disseminating and receiving information because extension needs to be 'demand-oriented' as well as 'supply-oriented'. In the past, the orientation on supply dominated in which the downward transmission of 'messages' to the target audience used to be the prime and only task of extension. One of the most important lessons learned from several decades of extension experiences is that audience participation is fundamental to sustainable extension and that the farmers that make up these audiences need to be regarded as 'experts' on their own situation and environment. Nowadays extension officers are expected to take into consideration the needs and circumstances of the farming community, and they should be able to communicate these needs to researchers, input suppliers, and policy-makers.

Achieving these goals and realizing high levels of efficiency and effectiveness in extension is not easy. The difficulties inherent in organizing large staffs push extension services towards rigid, top-down management of their delivery and feedback system. Extension systems are often large and complex organizations as they are aimed at the implementation of national policies for large and diverse clienteles across wide and often remote geographical areas and differing agro-ecological zones. The systems meet a number of conflicting imperatives. They are expected to maximize the scope of extension while minimizing its costs; to emphasize control through firm management structures and to ensure bottom-up participation; to increase the competence of their staff while taking advantage of the cost-saving, but more impersonal communication potential, of mass media and electronic innovations (World Bank 1990:4-5).

The extension worker is trying to do his job within this matrix of development objectives and local needs, political interests and rural well-being, bureaucratic demands and farmers' expectations, ambitious programmes and insufficient resources.

Expectations

There are few jobs in the world which can match the elaborate list of qualifications required of an extension worker. When reading handbooks on extension, one feels pity for the candidates who dare to apply for such a post. They must be either extremely committed, naive, or desperate for a job.

The extension worker is expected to possess a considerable wealth of knowledge, skills and personal qualities. According to Oakley (1985), four main areas of knowledge are important: the subject matter and technical aspects of the job; the cultural characteristics of the people with whom he will be working; the policies and regulations affecting the rural areas and development programmes; the main approaches to adult education and extension methodologies. Skills are required in organization and planning, communication, analysis and diagnosis, and leadership. Some authors have further specified the communication skills extension agents should have. According to Maunder (1972) a good communicator is a person who:

- Knows his audience, its wants and needs; knows his message, its content and how to present it; knows effective channels of communication to reach his audience with his message; and knows his own abilities and limitations.
- Is interested in his audience and its welfare, and how his message can help.
- Prepares his message carefully, using appropriate materials and devices to elicit interest and insure a successful reception of messages.
- Speaks clearly.
- Uses words and language the people will understand.
- Realizes that mutual understanding between teacher and learner - a common bond - is mostly the teacher's responsibility.
- Is aware of the limits of time; does not try to unload the whole burden of any topic at one time.

In the execution of his job, the extension officer should be able to act according to a number of basic principles of extension. Oakley (1985) lists five of them. The first principle regards the extension officer's relationship with his clients. He should be set to work with the people, not for the people. Only the people themselves can make decisions about the way they will farm or live, and an extension agent should not try to make these decisions for them. The second principle is that extension officers are accountable to their clients. Extension services and agents have two sets of masters. On the one hand, they are accountable to their senior officers and to the government departments that determine rural development policies. On the other hand, extension serves the rural people and entails a responsibility to fulfil the needs of the people in the area. The third principle, which is particularly valid in agricultural extension, is that extension forms a two-way link between research and practice. Trough extension research findings and recommendations are disseminated to the clients, and problems encountered in the field and results from field tests are transmitted to the research departments. The fourth principle states that extension should be done in cooperation with other rural development organizations. This sounds sensible enough since development is a process with many facets which should be promoted in an integrated way. The fifth principle reads that extension should involve different target groups. Therefore, extension cannot offer a single 'package' of advice, to suit to all farmers. Different groups need to be identified and the agent will have to develop programmes appropriate to each group. The smallest and poorest farmers will need particular attention as they may lack the basic resources needed to become involved in extension activities.

As a final characteristic, a good extension agent should strive towards making himself redundant. The ultimate goal of rural development is the empowerment of people to improve their own living conditions and quality of life and to gain self-reliance in problem-solving. Once this has been accomplished, the role of the change agent will evolve from that of a professional who influences innovation-decisions in a way deemed desirable by a change agency, to an adviser who can be consulted on technical or other matters by the clients whenever they feel the need for it.

This ideal set of requirements and characteristics of the extension worker has many valid points and makes sense from a theoretical point of view. However, in practice, the conditions of training, selection and service are seldom geared towards bringing out the best of the work force. The training does not match the requirements, the selection does not follow the criteria and the working conditions do not provide sufficient support and incentives.

In the field

People gifted with all the ideal qualifications of an extension officer are hard to come by. Those who have these qualifications will probably not opt for a career in extension, and if they do, they will not be posted in the field for a long time. They will easily find their way up the promotion ladder.

Salaries of field staff are usually modest and working conditions harsh, which makes the work of a change agent not an attractive career option. For many field workers extension is not a first choice, but the next best thing to a university degree. Once they have finished their college education they are employed by ministries without consideration of their aptitudes or personal interest. Landing up in a field assignment is regarded a temporary setback, to be borne while searching for some way to obtain an urban posting or to re-enter the education system.

An assignment in the field often means being posted to a place in the middle of nowhere where, hopefully, government housing is available. The more lucky ones are attached to a district office or training centre. In countries in Africa especially, they will have to perform their tasks with very few resources on hand and a minimum of support. Unlike workers in the four other government services typically found in rural communities - education, health, police and administration - extension staff work highly irregular hours and are generally required to travel around the countryside without receiving any extra compensation. Motorized transport is a luxury confined to supervisors and district officers. The average field worker is expected to travel his area by public transport, bicycle or on foot. His mobility is limited and the possibility of taking farmers on field trips is virtually non-existent. Under these conditions it is also very hard to carry around materials for demonstration and instruction purposes. Ironically - and fortunately in a way - he rarely gets any such materials from headquarters anyway.

The 'target' audience
Photo: Ad Boeren

Like any other professional, the new extension worker has to prove his or her competence on the job. It is not an easy task for a young graduate from the agricultural college to enter the homestead of an elderly traditional farmer and to offer his advisory services. Especially not, when he has never been a farmer himself, when he is not from the area, and when it is considered disrespectful to question the life-long experience of an elderly person. The first reaction of many farmers may be one of feeling insulted by this young upstart without practical experience, and it goes without saying that these situations require a lot of tact, patience and goodwill on the part of the extension worker. The fact that he is a government official may also not work in his favour. In countries where the farming community mistrusts the government,

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the extension worker is not received with open arms. He is seen as a representative of the government and in many cases this is amplified by the fact that he is supposed to carry out additional duties for the district authorities and the political party.

Close supervision of the field staff is usually quite problematic due to the thinly spread transportation facilities. Some field officers think this a disadvantage because they feel the need to discuss their work and problems with their superiors. Others regard it as an advantage because nobody actually checks on their performance. They could even fill the monthly progress reports with fictitious data and nobody would find out. Because of poor communications and the fact that they hardly receive in-service and refresher courses, their knowledge is not kept up-to-date or renewed and they run the risk of becoming as isolated as the clients they serve.

This description of the practice of extension seems exaggerated and sceptical. Unfortunately, it is not. The situation depicted is quite common in developing countries and has been reported in different words by various authors over the years. Based on first-hand examination of non-formal education programmes throughout the developing world, Coombs and Ahmed (1978:20) conclude that, to a greater or lesser degree, most extension services suffer from the fact that:

- there is insufficient cooperation with complementary services;
- they operate haphazardly, lacking priorities and plans;
- they are spread too thinly to be effective;
- their efforts are concentrated on large producers and major commercial crops while neglecting smaller farmers and the local crops of key importance to subsistence families;
- little effort is made to diagnose the differing needs of their client farmers, and, instead, standardized recommendations are handed out which many of these clients find impractical and useless;
- the productivity of their field agents is decreased because their in-service and refresher training are neglected, and they are burdened with distracting chores, provided with inadequate transport, and support by means of mass media and other communication tools is lacking.

Some years later, the situation had apparently barely improved. Feder (1985:2) lists similar conclusions in a slightly more formal manner: "Generally, insufficient manpower, due to inadequate budgetary allocations and a shortage of properly trained staff, leads to a high ratio of farmers to extension agents and to low effectiveness of extension efforts. In many areas agricultural extension agents are expected to perform multifarious duties, thus reducing the time available for information dissemination. Another common problem is the lack of routine updating of agents' agricultural knowledge and still another, the haphazard nature of agents' contacts with farmers".

Improving the system

Over the years governments and donor agencies have tried to improve the performance of the agricultural extension services. The attempts were mainly focused on the management of the extension system, the working conditions of the field staff, and the link between research and extension. Two systematic attempts in particular have been widely introduced and implemented around the world in a number of local variants. They differ in point of departure but can be considered complementary in their conceptual outlook. One of them, called the Training and Visit (T&V) system, focuses on the management aspects of the extension system and its activities, while the other, the Farming Systems Research (FSR), is aimed at the improvement of the relevance of the advisory services.

The Training & Visit system

The Training and Visit system was developed by the World Bank and was first tried out in Turkey in the late sixties. Later, the T&V system was introduced in most Indian states during the period 1975-85. Similar projects have since been implemented in various countries in Africa, Asia and South America.

The T&V system can be regarded as a method for organizing and managing an extension service. On paper at least, attention is focused on the farmer and his constraints, abilities, and needs and attempts are made to mobilize the entire extension apparatus and research system to serve him (Pickering 1989:5). The essence of the T&V approach is a tightly structured work programme for extension agents based on a strict schedule of regular and frequent visits to selected 'contact' farmers; technical training and updating sessions for extension agents; a hierarchical organizational structure (with subject-matter specialists and supervisors to ensure quality and efficiency) and an exclusive devotion to extension work (Feder 1985:2). Under the system, contact farmers are expected to act as opinion leaders. They receive a continuous and regular flow of information from extension agents, which they are expected to convey to other farmers. In order to have an effect, the T&V system should provide funding for appropriate numbers of extension staff at all levels and should ensure the mobility of extension agents. This way, it allows the extension officers to cover wider areas and a larger number of farmers.

It may be that we have not had enough experience with T&V systems yet to be able to draw definite conclusions, but the system has already been severely criticized from various corners on certain points, such as:

- Because it has been grafted on the innovation-centred approach, the system has a 'top-down orientation' which curtails its feedback dimension. A dimension which should ensure that research follows paths that are helpful to farmers.
- The adoption of T&V requires high initial and recurrent investments in establishing and operating large and manpower-intensive nationwide extension services. Few governments in the Third World can sustain these costs without external support.
- The T&V system lacks detailed methods for delivering advice, and the capacity of the field staff to communicate effectively with the farmers is taken for granted.
- In the system, the effectiveness of information delivery and increase of knowledge is emphasized over and above the relevance, profitability and cost-effectiveness of the advice that is being rendered.

And, probably the most serious criticism:

- Despite high investments in staff mobility and training, the system is not successful in reaching the communal farmer. The village extension workers continue to seek out richer farmers, even if this conflicts with national equity goals in agriculture.

Farming Systems Research

The Farming Systems Research (FSR) is focused in particular on the relevance of the extension message. In FSR, an interdisciplinary approach is employed and close ties between research and practice are advocated. The primary aim of FSR is to improve the wellbeing of individual agricultural families by increasing the yield of the farms while bearing in mind their limited resources and the conditions of their environment (Albrecht 1989). In FSR, researchers move closer to the field and try to work out feasible solutions in collaboration with farmers. In the research approach the following questions are addressed: What problems do farmers face and which are the most critical among them? What solutions are available already, and what research needs to be done to obtain other solutions? How can potential solutions - with all their technical, economic, social, and institutional implications - be tested, adapted, and evaluated in cooperation with farmers before an attempt is made to extend them to large numbers of producers (Faye 1989:67)?

In FSR, agricultural research is not restricted to experiments on research stations to find the best technical solution to a particular problem, but testing of solutions under local farming conditions is incorporated. In the course of the research and the extension sequence of development and dissemination of new technology appropriate for farmers, the perspective and criteria change from technical ones inherent in experimentation, to managerial ones used by farmers. On-farm research uses a managerial, or systems perspective to review the results of technical research and to identify - and where necessary modify - those results which are most relevant to the current needs of specific groups of farmers (Collinson 1989:51).

With FSR one can, in many cases, identify real problems, offer possible solutions, and verify the validity of these solutions before disseminating them. Through FSR advice is rendered which is specific to particular conditions, but this necessarily confines the relevance of the advice to smaller geographical zones and target groups. To introduce FSR nation-wide would require great numbers of research professionals who, unfortunately, are not abundantly present in most developing countries.

FSR has been criticized on a number of points, which include:

- the long drawn-out research process which clashes with the farmer's interest in immediate solutions;
- too much time spent on describing systems without ever making concrete proposals;
- the right kind of institutional base for developing the interdisciplinary approach does not exist;
- researchers and extension staff are not trained in holistic thinking or working together in interdisciplinary groups.

Looking at the stronger and weaker points of both approaches it is hardly surprising that the suggestion has been made to combine national systems - such as T&V - with FSR in order to possibly arrive at a 'natural symbiosis' which combines the 'ability to organize public servants for the broad dissemination of information' with 'results derived locally from participatory farming systems research' (Roberts 1989).

As promising as this option may sound, it is doubtful whether it will lead to the result hoped for. The experiences with the T&V system show that abundant funds, proper management and high mobility do not guarantee success. Likewise, through paying field staff better salaries and through updating their technical knowledge regularly one does not achieve much better results. A system like FSR can only be successful if it is built upon trust and cooperation between extension staff, researchers and farmers. Or, in the words of Albrecht (1990:72): "Above all, [success calls] for understanding on the part of researchers and advisers of the existing farming systems and appreciation that they are the product of a long tradition and adaptation to the prevailing conditions. Only when they are fully cognizant of a system can they propose carefully considered changes".

Among all the options which have been tried in the effort to improve the effectiveness of extension systems there is one that has received little attention, i.e. that of bringing the training of development workers - pre-service as well as in-service - in line with the requirements which are dictated by the conditions and tasks in the field. Surprisingly little attention has been, and still is, paid to the educational and social aspects of their work and to nurturing the right attitude towards the farming community, its knowledge and practices.

Out of touch

Little thought has been given to the influence of the origin of the extension systems and the underlying assumptions. Extension systems are mostly of Western origin, carrying all characteristics of the socioeconomic environment in which they were developed. As such, they work on the basis of assumptions which may not be applicable to situations in developing countries. Some of these assumptions regard the need for pilot farmers, the existence of the model farm and the representativeness of adult males (Belloncle 1989). The use of pilot farmers is common in extension services in various projects, and it may be argued that the philosophy behind this approach strongly contradicts the values of traditional society. The identification of pilot farmers and the specific support they are given can be perceived by villagers as a profound injustice, as a wish to favour certain individuals to the detriment of the community as a whole. The idea of the model farm rarely represents the reality of agricultural practice. Agrarian structures are usually infinitely more complex. Hardly anywhere does the farm consist of a plot worked continuously by a single tenant, as is suggested by the European idea of a farm. Nor is the farm solely worked by adult males as is suggested by the targeting of most extension approaches. In Africa especially, the importance of women and young people in agriculture cannot be denied.

In many developing countries the origin of the agricultural extension services lies in colonial times. They were set up to serve the needs of the commercial farmers. These were farmers who were market-orientated, who had a solid educational background, easy access to resources and credit, and who were usually well-informed about the national and global situation. What they needed from the extension services was information, i.e. research findings, management techniques and early warnings which would enable them to increase production. The agricultural colleges where the extension workers were trained offered a curriculum that prepared them for the task ahead: the passing on of technical information to a receptive and educated audience. After independence, the clientele of the extension services changed drastically. From the relatively small group of commercial farmers, the target audience expanded to include the rural population at large. The extension agencies were now confronted with the task of serving vast numbers of small-scale subsistence farmers, most of them illiterate and unaware of what happened beyond their village. Despite this dramatic change in the profile of the clientele, the objectives of agricultural extension services hardly changed, nor did the extension methodologies change in a fundamental way.

Likewise, the agricultural colleges made no substantial changes to their curricula. To this day, the prospective extensionists attend classes that are loaded with technical subjects, while they are taught very little about extension methods. When they leave college, they are unprepared for the job of change agent because they have not learned how to deal with an audience consisting of people who are not educated, not knowledgeable about western science, not market-oriented, not *a priori* receptive, and not endowed with financial resources. When they get into the field, they have to find out the hard way that agricultural extension for small-scale traditional farmers is not just giving technical advice but consists primarily of raising awareness, creating interest, discussing options, explaining basic concepts, etc. The only educational method the extension worker is familiar with is the lecture. By lack of exposure to alternative approaches, he copies the teaching styles of his teachers and, hence, he teaches in front of group meetings and he teaches individual farmers in the field. Farmers' meetings date back a long time and are highly ritualized occasions, attended mainly by older men with time to spare or unattached younger men seeking diversions. Especially in Africa neither of these groups tends to carry out the tasks under discussion, tasks which are generally the responsibility of women or hired labourers. For this reason, Moris (1989:78) is very cynical about the institution: "All in all, the typical extension meeting serves as a form of administrative theatre - complete with positions of honour, a recognized and familiar litany of innovations, a hortatory mode of address, and a tacit understanding that what is discussed will generally not translate into practice".

As an educator, the extension officer, like other change agents, is confronted with the problem of bridging the education gap that exists between him and the audience. Agricultural extension officers have spent 14-16 years in the formal education system before they enter the job. The highest level of education of the average rural farmer will not exceed that of primary school. The older generation may not have had any schooling at all. This gap in education, in combination with the differences in life-style and experiences, may produce considerable barriers in the exchange of ideas between change agents and rural audiences.

Because of their education, extension workers have been moulded in western knowledge systems and modernization perspectives. The scientific jargon which they have learned at college is difficult to translate into local languages. In the field they meet farmers who base their agricultural practices on knowledge, values and skills that have been handed down for generations and that have proven effective in the situation they live in. What happens is that a confrontation takes place between two knowledge systems, modern agriculture versus traditional practices. By virtue of their training, extension workers easily fall victim to the belief that modern agriculture is 'good' and traditional agriculture 'backward' and inefficient. Extension staff and agricultural researchers find it hard to acknowledge that traditional farming is a proven system in its own right, that the farmers are experts on their own farming system, and that small farmers are managers in every sense of the word. The prevailing attitude has been, and still is, that the (traditional) farmer is best helped with modern agricultural practices and inputs. This attitude prevents the extension officers from understanding small farmers and from transmitting key problems to research, which is essential if one is to prevent research from operating in a vacuum.

It is one of the tasks of the change agent to bridge these gaps. This requires an attitude of being prepared to learn as well as teach. Ideally, extension workers should be keen to learn from their audience about the way they live and farm, and keep themselves up-to-date with relevant developments in their professional field. But can we expect this from these people considering the education and training which they received and the rules of the structure in which they work?

'... a form of administrative theatre'
Photo: Ad Boeren

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Different training

Making the training of extension workers more relevant to the tasks they are expected to perform is an option which needs serious attention. Of course, better training alone cannot improve the performance of extension services. Training needs to be improved together with other measures, such as the ones described in the paragraph on the T&V system and FSR, and, most importantly, with the right political backing. Very few governments in developing countries put the interests of the small farmers first when designing agricultural policies. Unless this happens, a fundamental change in orientation, approaches and attitudes of the extension services and their staff is not expected to occur.

Making the training of extension workers more relevant requires a break-away from training programmes which are predominantly technical in orientation. In (agricultural) training colleges, students are trained to become subject matter specialists. The in-service training the extension workers receive continues along this track, the emphasis being on updating technical knowledge, and only a fraction of the time is reserved for extension methodologies.

Looking at their job description, the target audience which they serve, and the list of skills and characteristics required, one would expect extension officers not only to be technically up-to-date but also to be capable educators and communicators. Hence, training curricula should ideally reflect a balance in technical, educational and communicative subjects. What is lacking in existing programmes are modules on traditional farming systems, adult education, participatory approaches to development, rural sociology, extension methodologies, interpersonal communication, use of communication media, and the like. Such a training would make the extension worker better understand the knowledge system, beliefs and practices of the traditional farmers who form the majority of his clientele. It would also provide him with the perspectives and skills for better communication with this group. The system in which he has to work will not allow him to get involved in fully fledged participatory development, but at least he will be able to establish a dialogue and work towards a relationship of mutual respect and exchange.

Supplementing the training of extension workers to prepare them better for their work with traditional farmers would be a great step forward, but it would not be enough if it were to take place in isolation. A similar case of 'reorientation' could, and should be made for the training of all levels of personnel involved in development programmes, including the trainers, media developers, researchers, supervisors, graphic artists, decision-makers, etc. Maybe then a situation will be created in which all development workers, high and low, will regard extension first and foremost as an educational process which can only generate sustainable results if development workers, researchers and audience share the knowledge they have, and work towards solutions together as partners.

Note

1. In all cases in which the gender of the person referred to is not made clear in the context, the reader is free to read 'she' or, 'herself' instead of 'he', 'him/his' or 'himself'.

Part II

Communication and culture

3.

About meaning

It seldom happens that people who have attended the same meeting leave the venue with the same level of satisfaction. Mr A may feel content because he made his point and got the impression that the gathering agreed with him. His neighbour, Mr B, seems irritated because it is always the same people who do the talking, and modest people like him hardly ever get the floor. Once he made a point, which to him seemed very valid, but it had not carried any weight in the discussion. Nobody even picked it up. Mr C found the discussion very interesting. He did not participate in the discussion but by listening to the various arguments he managed to clarify his own views on the matter. Mrs D regrets that she was sitting at the back. She could not hear everything that was said and fears that she missed some important points. She observed that her husband, who was sitting in the front row, was ill at ease. She could see this from his posture and facial expression. Indeed, Mr D goes home convinced that he has wasted his time. He expected a lot from the meeting, but the turn which the discussion took did not meet his interests. He did not intervene because the majority seemed to be happy with the agenda of the meeting. As he arrives home he has already forgotten what was discussed.

In a nutshell, this short description of a meeting illustrates a number of essential features of communication. Communication involves an exchange of ideas between people. This exchange is, however, rarely balanced. Even in democratic meetings, like the one described above, some people exert more influence than others, either by their argument, character or status. The example also indicates that people enter into communication with certain intentions and expectations and that the impact of an exchange of views ultimately depends on the perceptions and interpretations of the beholder. Even though the participants of our meeting gathered to discuss a topic of common interest, their perceptions of the success of the meeting differed widely. Mr A probably thought that his contributions (as usual) had helped to forge a common understanding among the participants. He had clearly overlooked the reactions of the other participants: those of B, who probably disagreed with him because A was not paying attention to B's views; those of C, who was using A's intellectual *tour de force* to clarify his own thoughts, and those of D who was not really listening. Mr A also neglected another important feature of communication: people do not only communicate by word of mouth but also by other, non-verbal, means. If he had understood Mr D's non-verbal expressions in the same way as D's wife had, he would have realized that Mr D did not agree with what was happening during the meeting. Mr A wrongly believed that people who do not react verbally either agree, or do not have an opinion.

Communication is a process which leads to an effect. This effect may take different forms. In a meeting the participants may pay attention to a speaker without fully understanding the message. The mere fact that they pay attention is an effect, although a minimal one. Alternatively, they may listen attentively and understand what is being said, they may show their agreement, or they may even vehemently oppose the idea that is being discussed. If there is no effect, there is no communication.

The meeting described above showed a variety of effects on the participants. All of them were paying attention, and all of them understood what was being discussed. Some participated in the talking, others decided to remain silent, for different reasons. Even the fact that they did not utter a word contributed to the discussion. It probably gave Mr A the impression that his views were not opposed, with the effect that he carried on. Mr D showed through his posture and facial expression that he did not agree. This only had an effect on his wife, who knows what it means when her husband sits like that. Maybe others noticed it as well, but decided to ignore it. Most probably, Mr A was so occupied with his own contributions that he did not notice Mr D's reaction. Most likely Mr D was unaware of his own non-verbal behaviour and communicated his annoyance unintentionally. This fact, and the different reactions to Mr D's behaviour, clearly show that communication is defined by the interpretation of the beholder.

The example also indicates that meetings are communication events which consist of a complex network of communication processes that take place between the individuals who participate; verbally as well as non-verbally, intentionally as well as unintentionally.

Common understanding

Strictly speaking, there is no communication without mutual understanding. This is obvious in cases where people meet who speak different languages. They may try to react to each other but they fail to exchange ideas by means of a verbal language. The use of hands and feet usually helps to arrive at some sort of understanding. Understanding requires people speaking 'the same language'. This should not be taken literally. It means to say that in communication the participants should have a common interpretation of the ideas or messages that are being exchanged. If two people use hands and feet and attach the same meaning to certain gestures they make, they can communicate because of this common understanding. Speaking the same language, however, is not a safeguard against misunderstandings. Some words or expressions may have more than one meaning and the context defines which particular meaning is referred to. The word 'chick', for example, refers in its most familiar meaning to a young bird before or after hatching. In slang it usually means 'young woman'.

People who speak the same language rarely master identical vocabularies. The group(s) to which one belongs defines the vocabulary one is familiar with. Vocabularies are determined by social and economic factors, such as age, level of education, class, peer group and profession. Children have a smaller vocabulary than adults, medical practitioners have a stock of specific medical terms, and sociologists express themselves in a particular sociological jargon. Within their groups, people communicate fairly easily because they share the same vocabulary and a common understanding of the terms and words and because they share the same experiences and interests. Communication between people belonging to different groups is restricted to those fields where interests, experiences and vocabulary of the groups overlap. A medical practitioner and a sociologist may communicate perfectly well about matters pertaining to life in general and also about other matters in which they are both interested, e.g. politics, sailing, gardening. Communication would become problematic if they were to tell each other about their respective jobs. Even if they display a sincere interest in each other's profession, the specific jargon of both professions will prevent them from establishing a fruitful exchange on the matter.

Common understanding also requires a lot of specificity on the part of the communicator. Often communication fails because the speaker is not specific enough in his formulation and assumes more mutual understanding than is actually warranted. People often start talking about a topic, a person or a situation that occupies their mind, without taking into consideration that the listener may be thinking about something entirely different at that particular moment. For example:

A: I think one needs to economize.
B: I agree, but where to start?
A: I know. Basically it boils down to a cutting down on expenses.
B: That is easy to say, but what are the consequences?
A: No long telephone calls any more, I'm afraid.
B: She will never agree to that, I can assure you. It's her life line to her relatives.
A: Hang on. Whom are you talking about?
B: My wife. Take away the telephone and she will hang herself.
A: I see. I'm afraid I was not referring to your personal financial situation.

B: Oh, were you not?
A: No, I was talking about the budget of our office. Silly of me not to be more specific. I'm sorry.

Information carriers

The examples given so far may create the impression that communication is restricted to those situations in which people exchange ideas face to face. This is only part of the story. A reader takes notice of the ideas of an author, but instead of these ideas being expressed verbally they have been written down. The ideas are transferred from the author to the reader through a physical 'carrier', in this case a book or other printed material. Contrary to interpersonal communication which take place simultaneously and face-to-face, communication via physical carriers or electronic technology separates sender and receiver in time, space, or both. An author writes a book at a certain time in a particular place. The reader reads the book at a later date, sometimes centuries later, and maybe at the other end of the globe. Through live television coverage events that occur in one place are broadcast simultaneously all over the world; most television and radio programmes are, however, prerecorded and transmitted at a later date. The question may be raised wether the transfer of ideas and information by non-personal media can be called communication *pur sang*. There is no *exchange* of ideas but rather a one-way traffic of messages from a sender to a receiver. In this process the sender sets the agenda and does the 'talking' while the receiver assumes the role of passive consumer of information; the receiver has no opportunity to ask for clarifications, to interrupt, to give his own view, or to discuss the matter.

Non-verbal communication

Verbal language tends to play a dominant role in communication events, but we should not underestimate the importance of communication that does not rely on words. In everyday life we are surrounded by specimen of non-verbal communication. Three were already mentioned in the example of the meeting: bodily postures, gestures and facial expressions. Although unintentionally, Mr D gave expression to his mood by using his body as a medium. He could have done the same intentionally had he wanted to. Children give air to their frustration by sulking, angry people raise their fist against the person who annoyed them. An elaborate and formal 'language' of gestures is the sign language that is used by deaf people. It depicts ideas in gestures. Less formal, but not less explicit, are the inviting poses of prostitutes to attract clients. A smile on the face of a prostitute is meant to seduce. In other contexts, a smile is an expression of joy, is used to please people, to show sympathy, or to put someone at ease.

Attracting customers
Photo: Ad Boeren

When we take a walk down a street, our senses are flooded with impressions of traffic signs, shop windows, sign boards, flags, uniforms, fashionable clothes, fancy cars etc. These are all non-verbal communication media. A traffic sign is put there on purpose to convey a particular message. In a way it replaces a police officer who tells us that we are not allowed to enter this street, or that we are not allowed to turn right. A uniform tells us that the person who is wearing it has a particular occupation and function. In a way, everybody is wearing a 'uniform' and dresses himself according to the rules of the group he wants to belong to. Or, people dress for an occasion. We immediately recognize a wedding couple, an office person, a tramp, a punk, a jogger or devout muslim by the way they are dressed. People use cloths and all other items of fashion like hair styles, jewellery and perfumes to express or emphasize who they are and what they stand for. The same applies to buildings, parks, cars and furniture. Furniture differs according to the purpose it serves and the culture it belongs to. One can easily distinguish between furniture found in offices, living rooms, churches or restaurants. By the same token, churches look distinctly different from office blocks, mansions, railway stations or ordinary houses. Limousines are the prerogative of heads of state and the wealthy, while the less powerful travel on motorcycles or by bus. All these objects are media which carry a meaning for those who understand the underlying idea. As such, they have communicative value.

Meaning

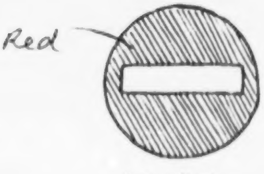
Not all objects are 'communicators', they are only that when people recognize them as carriers of ideas. A traffic sign carries an idea and will only communicate its meaning to someone who knows what it stands for. The same principle applies to verbal language. What happens when we speak? Physically we just utter sounds, but a group of people - or a language community - has agreed that distinctive sounds stand for an idea that we carry in our mind. By virtue of this agreement, i.e. a common understanding of the meaning of a sound, we are able to exchange ideas. When a member of the English-speaking community utters the sound 'dog' it refers to the idea of a particular four-legged pet. Other members of this language community share this meaning of the sound. To people of the French, Spanish or Chinese-speaking community the sound 'dog' does not mean anything, or it may mean something else. In the example of 'dog' the relation between the sound and the idea it represents is completely arbitrary. The English community could have decided to use any other sound, like 'fir', 'raf' or 'gos' to express the same idea. It would not have made any difference. Since there is an arbitrary relationship between the carrier of the idea (the sound 'dog') and the idea it carries (particular four-legged pet) we call it a symbol. Most words in verbal language are symbols. Exceptions are those words that imitate the sound of the thing they refer to, like 'click', 'drip', 'bang' etc. Because there is a relationship of imitation between the sound carrier and the idea it is called an icon. There is a third category of relationship between the carrier and the idea, called index. In this relationship the carrier 'points at' its meaning. A literal example of an index is when a person physically points at the object to which he refers. The onlooker understands the sign and focuses his attention in that direction. Most objects that 'point at' the status of their owners or users can also be called indexes. Limousines are indexes of wealth, so are expensive jewellery and clothing. When a person walks down a street and smells a pizza he knows that he is approaching a pizzeria. In this case the smell is an index for a particular type of restaurant. Mr D's bodily behaviour during the meeting is a clear example of an index: his posture and facial expression gave expression to his mood.

Symbols do not only occur in verbal languages. Every object, every smell, every sensory impression can become a symbol once a group of people agrees to give it a meaning. But the carrier and the meaning must have an arbitrary relationship. A national flag and the national anthem are symbols of a nation. Depending on its form, a cross is the symbol of Christianity, of death or of a relief organization. The white pigeon is the symbol of peace, and five interlinked circles stand for the Olympic games. The Statue of Liberty is the symbol of the United States, as the Eiffel Tower is of Paris. White is the symbol of marriage in Western cultures, and the symbol of death and mourning in India and China.

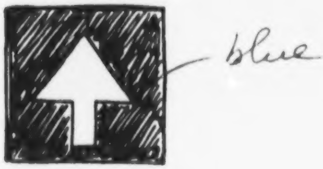
Iconic relationships are predominant in visual communication. Photographs are representations of reality. The carrier, i.e. the picture, and the subject that it represents strongly resemble each other. This characteristic has led development workers to believe that pictures (films and television) would be an ideal medium to be used in cross-cultural communication. Because pictures seem so close to reality, they expected that everybody, even in the remotest villages of the world, would understand these visual images without any problem. This has proven to be a fallacy, as will be explained in detail in Chapter 6. Although photographs are no doubt strongly iconic in character they still carry a lot of arbitrary and indexical meanings.

Many carriers have multiple meanings. Above we referred to the different meanings of the word 'chick'. The interpretation depends on the context in which the carrier is being used and the frame of reference of the interpreter. The colour red, like most other colours, has many meanings depending on the context. It refers to socialism, communism and revolutionary movements in a political context. It stands for passion in the context of romance. It signifies blood and sacrifice in situations of conflict, and it denotes danger in traffic signs. Depending on the setting, the smell of incense refers to religious ceremonials or an alternative life-style. Jeans are leisure wear for most people, but in combination with jacket and tie they refer to the life-style of young urban professionals. To wear them at an official party is a sign of disrespect.

Visual signs rarely consist of a single carrier with a single meaning. Most visual signs are complex signs because they always have a colour, shape, size, two or three dimensions, and a certain texture. Each of these aspects can carry meaning. Take for example traffic signs: they can be square, rectangular, circular, triangular, hexagonal; they are white, red, green, blue, orange, or a combination of two or three colours; they carry words, pictures or symbols. The two signs below we have learned to interpret as 'one way entry' and 'no entry'. The 'one way entry' sign is square, has a blue background and carries an 'index', i.e. an arrow. The colour blue in traffic 'language' indicates advice, as opposed to the colour red which signifies danger and prohibition. This colour is, therefore, reserved for the traffic sign that is placed at the other end of the one way street, prohibiting traffic from entering. The 'no entry' sign also has a different, i.e. circular, form and carries a horizontal bar which refers to a barrier.



Interdiction



Information

Coins have two extra features that carry meaning: material and weight. Humanity has decided that gold is more precious than copper, therefore golden coins represent a higher value than copper ones. An interesting question is how weight and size relate with regard to establishing the value of a coin. Bigger volume does not necessarily means more weight. It depends on the specific gravity of the material. There is evidence from research that visual impression overrules weight estimation. Among objects of the same weight but of different size, the bigger ones are thought to be heavier. In general, size and volume are very important signifiers of power, wealth and abundance. A look at the material aspects of American culture clearly proves this point: sky scrapers, limousines and Big Macs. But in less wealthy countries the principle also applies. In Africa, big women signify that their husbands can afford to feed them well, chiefs (like their western counterparts) live in big huts and compounds, and a big bowl of plain rice is regarded to be more nutritious than a cup of lentils.

Context

The setting, physical as well as social, in which communication takes place exerts considerable influence on the participants and the way they exchange ideas. The setting is a complex of information carriers in itself. A police station is an uncomfortable environment for most citizens. It has an unfamiliar atmosphere (which rarely puts one at ease), officers in uniform (uniforms create a distance) and rules of bureaucracy that suffocate spontaneous communication. A church, to give another example, will not be the first choice of young lovers who are looking for a quiet place to meet. They prefer parks or other public and less public places. A church qualifies as a very quiet place but the building carries serious religious meanings which regulate our behaviour. People visit churches to pray or to admire the architecture and pieces of art; people never run in churches and when they speak to each other they whisper.

In the context of extension, the setting is equally influential. Farmers like to discuss their agricultural problems with an extension officer out in their field, or at home. These are familiar environments and the discussion can be directly related to the situation at hand. An extension officer who arrives at a homestead in suit and tie is bound to be met with suspicion. It unnecessarily creates a distance between him and the farmer and hampers the creation of a relaxed atmosphere. A similar thing happens if the extension officer speaks a different 'language', either in the form of an unfamiliar dialect or in the use of a different vocabulary. It unnerves the farmer and gives him a feeling of inferiority.

Ideas or objects presented in different settings may have different meanings. Sickle and hammer are tools used in different trades, but depicted together in a red flag they symbolize the former Soviet Union. The sentence 'I feel like shit' can be taken literally or understood as an expression of unhappiness. Mistakes are easily made when ideas and objects represent something different from what they appear to be at first. 'Doubletalk', for example, is a well-known trademark of politicians. Politicians rarely express their personal views; promises made in election campaigns turn out to be rhetorical tricks. Many of their ideas should not be taken literally, but should be seen as playing cards and small change in the game of power. They are exchanged and sold as the game requires.

Everybody is familiar with the use of 'double' and 'indirect talk': quite common is the struggle to find indirect ways of telling a person whom we like or whom we need that he made a mistake, that he was wrong, that he behaved uncouthly. We will try very hard to make the message clear in a way that is not confronting or embarrassing to the person concerned.

More formalized and creative examples of roundabout and indirect ways of communication are metaphors, riddles and proverbs. Taken literally, they may have little or arbitrary meaning, but within the given context they become significant. Poetry makes extensive use of metaphors, i.e. names or descriptions applied to objects or actions to which they are not literally applicable. Just a few lines from Gutteridge's poem *Home revisited* (1939) to prove the point:

> 'Death as my walking past this empty shell:
> The fixed memory of life
> Ceasing like echoes in a well
> Beyond the last ripple of short grief.'

Here are some Maasai proverbs:

> The neck cannot rise above the neck
> = a son should not disobey his father.

The chip in the fire laughs at the one in the woodpile
= a fool never sees his own foolishness.
A zebra does not despise its own stripes
= one should not abuse one's traditions.
A house does not fall while its main pole is standing
(Fuglesang 1982:106)

And some interesting Swahili riddles in their English translation:

My house is small but it has many windows
Answer: a fish-trap.
A tree has fallen far away, but the branches have reached here
Answer: news of a death.
He goes on for ever, but never reaches his destination
Answer: the sun.
I came across a long chain on the road, but could not pick it up
Answer: safari ants (that walk in a row).
(ibid.:103)

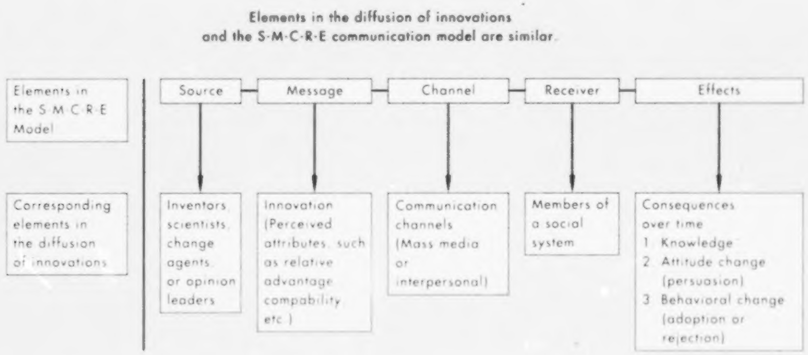
The same phenomena occur in other 'languages'. In visual communication also things do not always mean what they appear to. Girls do not wear miniskirts as an invitation to rape or as a sign of sexual liberty, but because they want to be fashionable, to look attractive - just for themselves, or for prospective boyfriends. Sets in theatre or film studios are not just facades but they are intended to create an impression of reality or fantasy. The huge statues found on Eastern Island are more than decorative; they probably had important religious meaning for the indigenous people who made them. Australian aboriginals draw patterns of dots and lines which represent the travels of their ancestral spirits, and Christians join two pieces of wood together to form a cross which represents the sacrifice of Jesus Christ.

Films, ballet and theatre use a lot of visual metaphors for artistic as well as practical reasons. Metaphors are used to express or amplify moods, to indicate the passing of time, to criticize people and systems, etc.. In the famous film *Citizen Kane* by Orson Welles (1941) the flying of time is indicated by a 'storm' which flips through the pages of a calendar, in the film *Battleship Potemkin* (Sergei Eisenstein, 1925) the harassment of the Russian people is expressed by a scene in which a herd of cattle is led to the slaughterhouse. Metaphors are particularly useful for the representation of aspects of human life which cannot be shown explicitly because of imminent censorship. A clear example is sexual intercourse. Film makers have developed a whole 'vocabulary' of visual metaphors to imply the act of love-making. The alternatives include waves breaking on the shore, a forest fire, a flower that opens, a train that enters a tunnel, etc.

This shows that natural phenomena can also act as communication media, provided people attach a specific meaning to them. A tree is a natural object but can become a symbol, for example the maple (leaf) which symbolizes Canada, and a leaf of the palm tree which stands for peace. Mount Fuji is a symbol for the Japanese, and the Asmat of Irian Jaya regard the *wènèt*, or praying mantis, as a symbol for the headhunter. Outside this symbolic context natural objects also have meaning, but not symbolic meaning. When clouds gather in the sky we see it as a sign of imminent rain, when leaves turn yellow we know that autumn has arrived.

The impossible model

Many authors on communication have tried to visualize the process of communication. Most common are models that are based on a rather simplistic Source-Message-Channel-Receiver-Effect or SMCRE model.


Elements in the diffusion of innovations
and the S-M-C-R-E communication model are similar.
Elements in the S-M-C-R-E Model
Source
Message
Channel
Receiver
Effects
Corresponding elements in the diffusion of innovations
Inventors, scientists, change agents, or opinion leaders
Innovation (Perceived attributes, such as relative advantage, compability, etc.)
Communication channels (Mass media or interpersonal)
Members of a social system
Consequences over time
1. Knowledge
2. Attitude change (persuasion)
3. Behavioral change (adoption or rejection)

From: Rogers and Shoemaker, *Communication of innovations* (1971:20)

The modernization and innovation approaches counted on this model. It is mechanistic in its operation and sender-oriented in nature, and it gives an oversimplified picture of what communication is. It serves perfectly to visualize the one-way information flow which characterizes mass communication, but it falls short in its visualization of interpersonal communication, dialogue and, more importantly, the essential characteristic of communication. As was stressed in this chapter, communication is a dynamic process of interpreting ideas. Ideas are attached to information carriers (sounds, objects, smells,

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phenomena) which allow the exchange of ideas between people. In fact, anything can be used to communicate as long as people agree on its meaning.

A sender may take the initiative to transmit a series of information carriers (e.g. sounds) to convey his ideas, but it depends on the willingness and particulars of the receiver whether and how these information carriers will be interpreted. Sender and receiver do not necessarily have to meet physically to be able to exchange ideas. A sender can lay down his ideas in objects (e.g. written texts) and other media, which may be interpreted by a receiver at a later date and in another place. And, very importantly, ideas are never transmitted *sec* but always within a network of other ideas and meanings. A poster that propagates the idea of breast-feeding has a slogan, is illustrated with a picture, has a certain type of lettering, uses a number of colours, is made of a certain material, has a particular size, and is displayed in a certain place. All these particular characteristics carry meaning, and will therefore influence the interpretation of the message. Similarly, a simple sentence like 'life is beautiful' can be interpreted in a number of ways depending on who says it, the way in which it is said, the context in which it is used, and the mood and experiences of the receiver.

The process of communication is extremely complex, as it works within a dazzling network of intentions, interpretations, social relationships, power structures, standards, values, etc. Many factors have an influence on the interpretation of information carriers. Considering its complexity, it is truly amazing not only that communication takes place, but that people continuously exchange ideas, seemingly without much effort. The next chapter deals with all aspects involved in the communication process and the way they contribute to the understanding, or misunderstanding, of the message.

4.
Wishful thinking

Would it not be nice if everything we say, write or produce finds an interested ear or eye and is understood the exact same way we have it in mind? Unfortunately, practice shows us time and again that this is wishful thinking. How frustrating it is to realize that people do not pay attention to, or misinterpret what we have to say. Can we blame the others or should we look critically at ourselves?

A communication event can be called successful if the message or idea is interpreted in the same way by the receiver as it was intended by the sender. Formulated in broader terms: when the sender has reached his communication objectives. The sender, however, should be aware of one crucial rule of the game: the receiver determines whether there will be any communication at all. The receiver has the ultimate power to say: 'I am not interested', 'I am not in the mood', 'It does not appeal to me', 'I don't understand what you are talking about', 'I have no time'. For a source to be successful it has to level these barriers, and this can only be accomplished if the source takes the situation of the receiver as his point of departure for communication. Instead of relying on assumptions and on the conviction of his own importance, the source should be willing to face the most challenging, and at the same time most relevant, question the receiver may pose to the source: 'Why should I spend my valuable time listening to you?'

All factors that hamper the effectiveness of communication and undermine its objectives are obstacles to communication. They can be called barriers, but are also referred to as 'noise' in the communication process. A crackling sound on a telephone line is a form of 'noise' which makes it very difficult to grasp the words of the speaker. Noise is not restricted to technical shortcomings but can be generated by all aspects in the process, and at any stage of the communication process.

A communication process is made up of the following aspects:

Source: a person or object/entity that conveys an idea;
Receiver: a person for whom the message is intended;
Content: the idea that is being communicated;
Coding: linking an idea to an information carrier;
Decoding: interpreting an information carrier;

Objective: the intended effect to be achieved;
Medium: the type of carrier used to convey the idea;
Format: the way in which the idea is presented;
Context: the non-physical environment of communication;
Location: the physical environment in which communication takes place;
Time: the moment at which communication takes place;
Duration: the length of the communication event.

When people are involved in a dialogue or meeting, the participants continuously change roles. One moment they act as sources of communication, the next they act as receivers, etc.

All aspects of the communication process can generate 'noise' which disturbs or blocks the transfer of ideas. Below, the 'noise potential' of all these aspects will be discussed.

Source

The three foremost characteristics an ideal source should have are: authority, credibility and appeal. By authority we mean weight of opinion or, influence over opinion. People tend to pay more attention to people with authority. Depending on its origin, authority can be ascribed or achieved. Ascribed authority is linked to a position one holds in society: royalty, heads of state, chiefs, village heads and heads of families have authority because of their position. Their words carry weight because of this. Achieved authority, on the other hand, is based on the knowledge and skills an individual has acquired, and on his success in life. Medical practitioners have gained knowledge on health matters, blacksmiths have acquired skills in forging iron and making tools, and priests have become specialized in spiritual matters. They are authorities in their respective fields of expertise. Quite often, achieved and ascribed authority overlap. In many societies, the elderly exert great influence because of their age (ascribed authority) and wisdom (achieved authority).

Credibility has to be proven. A source is credible when we find the person or object believable, when we regard the source as sincere and trustworthy. Credibility partly overlaps with achieved authority, and not necessarily with ascribed authority. We may pay respect to people in high positions but we may not find them credible sources of information. Proven knowledgeability, however, strongly supports credibility. If an extension officer has given a farmer good and profitable advice, he will have proven his knowledgeability in the eyes of the farmer and be accepted as a credible source of advice and information.

Credibility can also stem from sincerity and trustworthiness of the source. An extension officer may not be able to give useful advice under all circumstances, but he may show by his attitudes and dealings with the farmer that he tries to be of help and is doing his best. Although this may not increase his authority, it will certainly create an impression of sincerity, and increase his credibility as a committed human being. The other source of credibility, trust, is fed by positive experiences. By proving that he can be relied upon, a person (or institution) increases his trustworthiness. Without much thought, we deposit our money in a bank expecting it to be kept safe. Every time we withdraw or transfer money, we experience that the system works and that our money is still there. Unless the system breaks down we keep on entrusting our money to the bank.

Appeal is the third important characteristic of an ideal source. Appeal may be based on physical presence, personality, or an intriguing nature. Appeal helps to attract and captivate audiences, and it influences our feelings of sympathy, not only towards the source itself but also towards its message. Publicly as well as privately, people spend fortunes and go to great lengths to enhance their physical presence. In the US presidential elections, every candidate has a considerable staff of communication experts, psychologists, (hair)dressers, visagists etc. at his disposal, whose task it is to make sure that the candidate presents himself in the best possible way. They advise on hairstyle and costume, on when to smile and how to smile, on the speed of speech and the pitch of voice, which side of the head should face the camera, when to be accompanied by spouse and children, or when better leave them at home. Although ordinary people lack the same expert assistance, they nevertheless have their own ways and resources to present themselves better when they want to appeal to other people. Not necessarily by physical means, but maybe by actions, by paying attention, by telling jokes, by talking enthusiastically about an interesting topic, by an eccentric life-style, or by just being themselves.

The example of the presidential campaign shows that many details which form part of the presentation of the source have an influence on the interpretation of the source itself. A source never stands alone, he is always entangled in a network of meaningful entities. These entities or signs, when carefully selected, may strengthen the appeal, credibility and authority of the source. Above, a number of physical signs were listed, such as facial expressions, clothing, hairstyle, etc. Authority of the source is enhanced when objects are used which more or less directly point at the expertise of the source. A medical practitioner has more authority when wearing a white coat and a stethoscope than when dressed in plain clothes. A professor is preferably interviewed sitting behind his desk in front of bookshelves loaded with books and a pair of spectacles on his nose. An African chief may wear a leopard skin, a ritual fly whip and other paraphernalia when on official duty.

Sometimes the signs which surround the source, or the qualities that are inherent in the source, may contradict his authority and will negatively influence his credibility. A speech impediment, e.g. stuttering, is detrimental for public speakers, but it hardly affects the credibility of stutterers in all those jobs which do not require speaking in public. During the Gulf War in 1991, President Bush was often interviewed, both at the White House wearing suit and tie and at the golf course wearing leisure clothes. In both contexts, the outfit was appropriate and credible. If the venues and outfits had been interchanged President Bush would have lost much of his credibility.

Appropriateness of presentation is also the topic of the following example. Once I had the pleasure of accompanying two home economics officers, based at headquarters in an African capital, to the rural areas where they were going to give a demonstration of the preparation of a balanced meal. The ladies looked gorgeous in their fashionable dresses, high heals and fancy sunglasses. Before starting their cooking activities they put on immaculate white overcoats. The meeting was held outdoors with an audience of rural women wearing their everyday clothes and babies on their backs. They were sitting on the ground, grouped around the neatly laid-out table at which the officers prepared the meal. The women watched the presentation without comment, and without raising a single question, despite the fact that the 'lecture' was quite complicated. As onlooker at the scene, I had the strong impression that two different worlds were meeting but not communicating under that tree. The women paid respect to the ladies because they represented government, high status and learning. The physical appearance and behaviour of the ladies, however, did not contribute to their credibility as sources of information which were relevant to rural women. The way they looked communicated, justly or unjustly, that they lacked affinity with rural life, that they were unmarried and had no children.

The same principles of authority, credibility and appeal apply to media. It is an interesting phenomenon that media, especially the mass media, are generally regarded as sources with high levels of authority and credibility. People readily believe that whatever is printed or broadcasted is really true. This authority is primarily ascribed and certainly not based on proof or positive experiences. By habit I listen to the weather forecast every day, and although I know that forecasting the weather in countries with a sea climate is rather difficult, and in spite of the fact that predictions regularly turn out to be complete failures, I continue to attach belief to what is forecasted. It helps me to decide whether to carry an umbrella when leaving the house. I probably would never accept this 'incompetence' from a personal weather forecaster, if, by chance, I had one.

Not all media have the same high levels of authority and credibility, however. Sunday newspapers with their emphasis on gossip and sensation are not regarded as reliable sources of objective information. Daily newspapers do better, provided they avoid the style of journalism used by the tabloids. Non-fiction books, especially scientific ones, have a strong air of authority. Non-fiction films and documentaries have a similar status. On the other end of the credibility spectrum we find comic books, usually regarded as children's literature, characterized by fiction stories and a high entertainment value. At least, this is the situation in Western countries. Experiences with comic books in developing countries show a different picture. Comic books can be used as very credible sources of information for neo-literate adults.

Appeal is a strong characteristic of comic books: they combine intriguing visual presentations with a simple story line. All over the world people love to tell or listen to stories. Another medium that relies heavily on appeal to convey its message is the poster. Posters are solitary media, displayed in public places and relying on their own strength to convey their message. Their visual presence should be capable of attracting the attention of the passers-by, as flowers attract bees by their striking colours. Posters, like people, may attract attention because of their beauty, because they are naughty, because they 'shout', because they terrify, or because they make promises. Posters illustrating health issues may terrify people because they show a malnourished baby being bottle-fed, or they may please and be found promising because they show a strong mother breast-feeding her healthy baby. Commercial posters that promote products often seduce. By showing the product in an attractive situation or environment it is implied that the purchase of the product brings within reach a certain life-style, a happy husband, an attractive girlfriend, stronger teeth, or a better figure. These posters appeal to needs, dreams and aspirations that people have. Other media use the same techniques to attract audiences, but in posters and advertisements these techniques are most apparent.

Receiver

A human being receives and processes information that arrives via the senses twenty-four hours a day. Although the human brain can be regarded as an amazing 'computer' with an enormous capacity, it cannot cope with all the information that is continuously being offered. This is not necessary either, because not all information is relevant to our needs of the moment. To select relevant and reject less relevant information, the human mind makes use of devices that can be compared with 'screens'. Only the information that passes the screens is perceived and interpreted. When we are asleep the meshes of the screens are very small, but they still filter information through. When we are reading a book whilst the radio is playing we direct our 'screens' to favour the information flow that is coming to us by way of ears or eyes. When we concentrate on reading we will hardly register what is on the radio. Conversely, when we pay attention to the radio, we may read the lines in the book but we will not register their meaning. A similar thing happens when our thoughts are occupied by something and we try to read or watch television. Time and again, we have to re-read paragraphs because our concentration fades away, or we just stare blankly at the screen without actually watching the programme.

Our focus of attention is determined by needs, interests and circumstances. If my shoelace breaks when I am walking down a street, I am confronted with a problem that needs a speedy solution. Regardless of what I was thinking before, I will now shift my attention to finding ways to repair or replace the shoelace. Maybe I will search the pavement for a piece of string, or try to find a shop where they sell shoelaces.

Interests, like needs, have numerous sources: profession, gender, age, hobby, studiousness, curiosity. Put a shoemaker in a busy street for half an hour, ask him what he has observed, and he will probably be able to give you a professional analysis of the shoes that passed by. In the same street aged people may have looked for safe places to cross the street, and an actor may have studied the behaviour and bodily expressions of people. In a different environment, but following the same principles, farmers have developed a special eye for soil types, weeds, for signs that will predict the weather, and that indicate diseases or pests.

The examples point at a very important determinant of communication; they indicate that what we register (i.e. consciously perceive) is very much determined by our knowledge and experience. Through learning and experience we are able to give meaning to what we perceive. Women in the rural areas of developing countries have learned to recognize the trees, bushes and plants that provide edible substances. They can recognize a particular plant from a distance by its shape, size and colour. With that particular 'screen' in mind they scan the surroundings. To a city dweller the same surroundings are 'meaningless'. He sees a green wall with some variations in colour, shape and sizes here and there. The stock of our knowledge and experience enables us to focus our attention, but it also defines the boundaries of the information that we can interpret. A West African saying sums it up beautifully: the eyes of the traveller are wide open, but he only sees what he already knows.

A young man living in the interior of Papua New Guinea was once taken to the coast by a small Cesna. He was the first person of his village to disappear into the air. When he arrived at his destination he was confronted with all sorts of things he had never known before. One of the things that struck him was a strange animal. Upon his return (which was already a miracle to his relatives) he tried to report about this animal to his fellow villagers. He had seen this enormous pig with long legs and a long neck, carrying straight hair along the neck and a long tail of the same hair at the back. His fellow villagers shook their heads in disbelief and pitied the traveller. The miraculous trip had apparently badly affected his mental faculties. What the villagers could not know is that the boy had seen a horse. He had recognized it as an animal, but unlike any of the animals he was familiar with. He was certain that it was not a bird, a reptile, an insect or a fish. The animal came closest to one he knew well, i.e. a pig, with its 4 legs and a smooth skin. Therefore, he described this strange creature to his fellow villagers as an enormous pig (Connoly 1983).

This strong relationship between knowledge and experience on the one hand and our capacities to interpret information on the other, has important implications for the process of communication and the introduction of new ideas. The receiver will not grasp new ideas unless he can relate them to things he already knows. A Ghanaian acquaintance once told me that he had successfully completed high school, including the science practicals, without having a clue what was meant by the term 'room temperature'. He and his schoolmates had been too embarrassed to ask. It was only when he travelled to the Northern hemisphere that he noticed and understood the difference between outside temperature and room temperature. In his own village there was hardly a difference between the two.

Lack of attention, interest or understanding are not the only conditions on the part of the receiver that may cause obstacles to communication. There are others, such as the physical condition of the receiver, the degree of sympathy towards the source and the message, differences in values and culture. The latter two will be discussed in more detail in the following chapter.

The physical condition of the receiver is of influence on his perception. Elderly people become far-sighted which means that for reading they need the help of special glasses. Many elderly people also have problems in hearing. A sender should be aware of this and adjust his communication according to these conditions. For example, many elderly people in the Third World do not have, and cannot afford, reading glasses. Consequently, the texts of reading materials aimed at the elderly should be printed in larger letters.

Other physical conditions which impair one's attention are pain (e.g. a headache), disease or hunger. These conditions negatively influence people's ability to perceive and think. It is well-known that children who are malnourished or suffer from diseases perform considerably worse at school than their healthy class mates.

A receiver may have positive or negative feelings towards a source, a medium, a topic, or a format. Sympathy is a relative concept and a very personal matter. It is the receiver who develops his personal sympathies and dislikes. These feelings very much determine whether the receiver wants to pay attention or 'turn off'.

People have preferences with regard to the newspapers they read, the radio stations they listen to, the television channels they watch, the type of books they read etc. Some like to watch panel discussions or talk shows, others prefer news items and documentaries. In this respect, people in the rural areas in the Third World are no different. The communities have a strong oral tradition. All important matters about life, and the history of the people, are conveyed from generation to generation by word of mouth, rituals and ceremonies. Folk tales, myths, legends, proverbs, songs and dances are cornerstones of their cultural heritage. These are the media with which they are most familiar.

Content

The influence of content on the effectiveness of communication was already implied in the previous paragraphs. If the content of the message is not interesting and understandable, the receiver will have no reason for paying attention. Interests are based on the needs which the audience experiences at the moment of communication. To some extent interest also depends on the sender's ability to make the receiver realize a certain latent need, or at least, his ability to make explicit how the message is linked to the needs he has. Understanding the message is dependent on the knowledge and experience the receiver has. New ideas or phenomena can be understood by the receiver as long as he can relate them to concepts already deposited in his mind.

Coding and decoding

In the process of coding we link an idea to an information carrier (medium) or set of information carriers. In Chapter 3 we mentioned that sounds, smells and visuals can carry meaning and are therefore capable of communicating messages, provided that the receiver, in the communication process, 'decodes' the message according to the same coding system used by the source.

It is well known that the word *mañana* means something else to Spanish or Latin American people than its literal equivalent 'tomorrow' does to English-speaking Westerners. When a Latino agrees to do something *mañana* he does not necessarily mean that it will be done the next day but that it will happen in due time. Similarly, many foreign businessmen have misunderstood the Japanese use of the word 'yes' in negotiations. To Japanese 'yes' does not necessarily mean 'I agree' , but should be interpreted as 'I hear you'. Even if they disagree, the impression is given that they agree. It is a matter of politeness and a strategy to come to a consensus by way of negotiation. Many foreign businessmen left Japan in high spirits in the conviction that a deal had been struck, only to find out later that the deal had not been concluded at all.

Difficulties of this sort not only occur between people belonging to different cultures. A few years ago I read an article in a local African newspaper. It reported a quarrel between a policeman and a bus driver. The policeman was on duty, wearing plain clothes, when his car broke down. He stepped onto the road and made a stop sign to a bus that was approaching, with the intention to require a ride to the nearest police station. The bus driver ignored his sign and, while passing, the bus happened to drive through a pool of water which drenched the officer of the law. The infuriated policeman managed to stop a passenger car and ordered the driver to chase after the bus. At the next bus station, the bus was overtaken. The policeman entered the bus and arrested the bus driver for ignoring the stop sign and contempt of an officer of the law. The defense of the bus driver was very short: 'But sir, this is a non-stop bus service!'. This example points at two discrepancies in coding. What the policeman tried to communicate when ordering the bus to stop was ineffective because his stop sign was not supported by the necessary authority of a uniform. Because of this lack of decorum, his sign was interpreted as a request made by an ordinary traveller and not as an order from an officer of the law. The defense of the bus driver points at a very literal interpretation of the concept 'non-stop bus service'. His understanding of the concept was directly linked to the act implied in the verb, and not to the notion which is commonly referred to, i.e. a non-stop bus service does not stop at intermediate stations.

Rules of coding and interpretation apply equally to visual signs, because visual signs also have 'language' characteristics. In development communication, many 'incidents' involving the cultural specificity of colours have been reported. A well-known example regards a health programme in India for a poster was produced to recommend a particular sanitary practice. To make the poster look attractive it was decided to give the background a light blue colouring. In Western contexts light blue is a colour associated with the sky and water and therefore regarded as clear and clean. However, in some parts of India light blue is associated with uncleanliness and disease. Not surprisingly, for people from those areas, the poster carried extremely contradictory messages. It was confusing instead of encouraging.

A Thai friend once told me a story about one of his experiences in the Peoples' Republic of China. One evening he and his company had dinner in a restaurant. After they finished the courses the Thai friend asked for the bill. Since he did not speak Chinese he used the Thai visual sign for ordering the bill: making a horizontal circular movement with the right index finger. The waiter smiled, nodded and went to the kitchen. Time passed and no bill came. The friend grew impatient and once more called the waiter. The waiter signalled that he had not forgotten. It would arrive soon. A few minutes later he appeared with a tray covered with dishes, the same food the customers had just finished. At that moment the friend realized that something had gone wrong. Indeed, his visual sign carried another meaning to the Chinese. Instead of 'give me the bill' it was interpreted as ' give me another round'.

The only way a source can find out whether it is communicating effectively is through feedback, and this feedback must come from the receiver. In interpersonal communication, the partners notice immediately if there is a lack of attention, or disinterest, misunderstanding, disgust or other reactions that hamper an effective exchange of views. They can take action immediately to try to remedy the situation. In a dialogue, the responses and reactions quite clearly reveal whether the partners in communication are still on the same level of understanding. This form of direct feedback is not possible in communication via mass media. Misunderstandings can only be rectified much later when the audience has reacted to the programmes or articles.

Objective

The objective, or aim, of the communication process is best described as the effect that is intended. The aims of communication can be manyfold. They may be a call for attention, an effort to inform, to share knowledge, to convince, to socialize. The aim of communication may also be to satisfy curiosity, to gather information, to learn, to entertain, to pass time. The effect intended will only be achieved when the receiver goes along with the objective of the source. The communication objective of the source has to correspond with a complementary objective of the receiver. If the objective of the source is to pass on knowledge or information, it will only be achieved if the receiver enters into the communication event with the aim to learn. Not if the receiver's motive to participate is just to be entertained, or to have fun. The source may get annoyed rather than realize that there is an obvious discrepancy in objectives.

Extension meetings are not seldom disturbed by members of the audience who have their own agenda. Either they are drunk, chat with their neighbours, try to trap the extensionist with shrewd questions, or take the floor to show how funny they are. In these situations, the best option for the beleaguered extensionist is not to try to deal with the sources of disruption by himself, but to rely on the social dynamics of the group. The members of the group who have come to listen will also get annoyed and will deal with the trouble makers in their own, effective ways.

Other communication events, instead of calling for a complementary relationship between the objectives of the source and the receiver, require a similarity of communication objectives among the partners. This is the case when people enter into a serious discussion, have a casual chat or participate in a social evening. Social talk usually combines at least two objectives, the exchange of information and the establishment or maintenance of social bonds. Other objectives may play a part too, like entertainment and the passing of time.

Sometimes communication events fail because the objectives are unrealistic. In extension this happens quite often. An extension officer entering a homestead of a farmer has a considerable choice of communication objectives, e.g.

to make contact (if it is his first visit), to inform, to create awareness, to discuss, to convince, to advise, to demonstrate, to monitor, to evaluate. Ideally, the selected communication objective should match the information and learning needs of the farmer at that moment. The extension officer has to find out whether the farmer lacks the basic knowledge to analyze a problem, needs advice on alternative farm practices, needs training in the application of new farm inputs, or whatever. Only then can he make his communication objective match the needs and expectations of the farmer.

Medium

The medium is the type of carrier used to convey messages. The majority of media are aimed at either our ears or our eyes. Verbal language, morse code, music, bells and hooters make use of of audio channels. Printed materials, photographs, (traffic) lights, smoke signs etc. use visual channels. A number of media combine audio and visual channels, like television, film, video and drama.

Two sorts of problems can be caused by the communication medium: technical failures and an inappropriate choice of the medium. First a number of technical failures will be discussed.

Technical failures of the medium consist of all the mishaps that hamper the clear reception of messages. A speaker will not be heard by the audience if the volume of speech is too low, or if background noises drown his words. Written texts can be misunderstood because of misprints and typing errors, while photographs may not be recognized because the colours do not match the real ones. Radio and television broadcasts can be severely disturbed by poor reception and power failures. The opposite, strong reception, may also cause problems as is experienced by residents who live near the transmitter of Radio Vatican, believed to be the biggest in the world. They filed complaints that the radio's transmitters are so powerful that the programmes (broadcast in 34 languages) can be heard trough intercoms, cause quartz watches and clocks to 'go mad' and 'burn out' transistors and stereos. The programmes can even be heard, loud and clear, through such appliances as immersion heaters.

The choice of a medium may not be appropriate because it does not suit the objectives and conditions of communication, or because the particular medium is not liked by the audience. All media have their own specific characteristics, their strong and weak points. Ideally, media selection should be based on a careful analysis of the objectives and conditions of a particular communication event. Such an analysis should make clear which media in this particular case can be expected to perform best. In practice, however, media selection is not determined by careful examination but by the available means and popularity. In the past few decades, the use of media for development has resembled a fashion show. In the early days, radio and television were expected to solve all communication and development problems. Later on, small media such as slide series, posters, flip charts etc. became very fashionable. In the next decade, traditional media came to the fore, and more recently, the use of video is at the centre of attention. This trendy fascination with particular media is rather naive and inefficient. Nobody would trust a doctor who prescribes the same treatment for all diseases. Why then should we believe that one particular medium could solve all communication problems?

Format

The format of a communication event is the formula in which the message is presented. To elaborate on what is meant by this, a brief outline of the major radio formats is given below. The descriptions of the formats are taken from *A handbook for scriptwriters of adult education broadcasts* (Welsh 1969). The formats are fairly similar to the ones used in television and can also be recognized in written materials.

a. *News item*
   A news item usually gives the bare facts of a situation or topic very shortly after it has happened. The purpose is really to inform, not to educate in any direct fashion.

b. *Report*
   The report is an expanded news item in the form of a short talk. It does not usually consist of personal comment or opinion but concentrates on giving us much more detail about the event. If the reporter attempts to interpret the news item, suggesting possible future developments or repercussions, the report becomes a commentary.

c. *Straight talk*
   A straight talk conveys information or opinion in a direct, though not necessarily simple, manner. It makes least concessions to listeners' patience, attention span, desire for entertainment, or their intellectual capacity. It is a very concise and economical way of conveying information, but can only hold the attention of an audience that is already interested in the subject in question. Most extension radio programmes in developing countries are built around straight talks.

d. *Interview*
   The interview is a means of eliciting information, either facts or opinion, from either an expert on a particular subject, or from someone who has participated in, or witnessed an event which he can describe, or from the Man in the Street, with the purpose to gauge public opinion on a given topic. Interviews add veracity and plausibility to a piece of information and they appeal to the listener because, usually, the information is given in everyday language and is, therefore, more accessible.

e. *Panel discussion*

In a panel discussion several people take part in a discussion of a certain topic led by a chairman. It may also contain relevant recorded material which is to be commented upon by the panel, or which is used to stimulate the discussion. Or a recording may be used which confronts previously known differences of opinion of panel members, to achieve both a more exciting discussion and a deeper examination of the issue. A panel discussion may help the listener to form an opinion on an issue by comparing various point of views.

f. *News magazine*

The news magazine performs the same function as the straight talk but contains topical, on-the-spot descriptions of situations, or interviews, and thus possibly contains evaluative or critical comment or appraisal. It is essentially topical and informational, not directly educational.

g. *Feature* or *magazine*

A feature or magazine consists mainly of factual illustrations but may also use dramatized material, i.e. fictional illustrations or 'staged' interviews.

e. *Play* or *dramatization*

A play presents a story in the most active form, the form which seems nearest to real life. This form of presentation is both the most entertaining and the most involving form for the listener. In the play, the listener can recognize similarities to people he knows in his own circle of friends or acquaintances, and also perhaps identify himself with the activities, joys or misfortunes of the characters. Once attention is held, and a degree of identification has been achieved, it is possible to get across a moral, propagandistic, inspirational or motivational point.

Within these formats, other formulas are being incorporated that people use in everyday communication to discuss or convey ideas. Examples of these traditional communication formats are proverbs, riddles, fables, jokes, legends and folk tales. Proverbs are very concise pieces of folk wisdom which, when used at the right moment and in the right context, are effective instruments that can be used to clarify or stress a point that is being made. In West Africa especially, there is a strong tradition of using proverbs. A person's mastering of many proverbs and their effective use in discourse provides him with considerable authority. In the past, traditional court cases were battles of proverbs between the conflicting parties. By a better command of proverbs one of the parties could settle the argument in his favour.

The strong point about traditional communication formats is that their structure is very familiar to the users. These structures enable the users to easily memorize the content of the story or statement. The opening phrase 'Once upon a time...' directly points at the format of a fairy tale and the audience may expect that a familiar story line will lead to a happy end. The details of the story may be new but the structure is known. It is like building a new car body on an old chassis. The result will be a car with the same essential features but with a different look.

I have often carried out a test with a group of trainees to show them the importance of familiar formats in memorizing messages. First, I gave a short talk about a topic with some detail, and asked volunteers to try to reproduce the contents as accurately as possible. The results were usually not very encouraging. At best, they could remember the main points, but failed to reproduce the details. After this, I told them a joke, making it a long story by adding a lot of (irrelevant) detail. To their own surprise the volunteers managed to reproduce not only the complete story line but also most of the details. No doubt the entertaining quality and the familiar structure of the joke had made a major difference.

Context

Interpersonal communication involves social relationships between people. Factors of power, control and dependency are inherent in social relationships, and most relationships are characterized by a certain inequality defined by differences in knowledge, wealth, position etc. Parents dominate children, the rich dominate the poor, and teachers dominate pupils. Rules of conduct support these inequalities. Japanese in lower positions have to make a deeper bow than those in higher positions. Thai citizens who have the honour to meet their King have to use a special court language. In many cultures it is customary that a person of higher authority indicates when somebody of lower stature is allowed to speak.

In general, dependents feel obliged to listen while the more powerful assume the prerogative to speak. In development terms we would label this a top-down approach associated with a one-way flow of information. Linked to this rather authoritarian approach there are certain communication formats and communication media. Straight talks and lectures on the one hand and mass media on the other are examples of formats and media which embody this top-down, one-way communication approach. In the context of formal education, training, law enforcement and politics, top-down approaches do have a function. They are also useful when information of general importance has to be conveyed. However, in the context of adult education, development and social change they are counterproductive. Top-down approaches do not stimulate critical thinking and enforce existing dependency relations. The 'Freire revolution' (Freire 1972, 1976) challenged this authoritarian approach by making awareness-raising and dialogue the cornerstones of development. The traditional teacher-student, oppressor-oppressed relationship had to be replaced by a relationship of equals who would exchange and share information. In this dialogue model, all participants would be learners, teachers learning from students and students learning from teachers. No participatory development is expected to take place unless the traditional barriers of inequality, including education and communication practices, have been altered structurally (Lent, 1987). The communication formats which suit this approach best are dialogue and discussion, and the smaller media, including the traditional ones, are seen as the most appropriate to support it. Smaller media can be made to serve particular problems or groups, can be managed by local groups, and allow a much higher degree of feedback.

Depending on what the sender wants to achieve and wants to radiate, he can position his communication approach on a scale of which the extremities are formed by the top-down approach on the one end, and the dialogue approach on the other.

Another social factor which influences communication is the sympathy which source and receiver, or the partners in communication, feel for each other. This 'biochemistry' provides the motivation to open your heart to the other, to help each other and to share. Sympathy cannot be simulated, it is a symptom of a state of mind. It makes a receiver listen more carefully to a sympathetic source than to one which he dislikes. Similarly, a source is stimulated by a sympathetic receiver to communicate with greater effort and to seek feedback.

Sympathy, and its counterpart antipathy, need not be mutual, nor do they necessarily involve a social relationship. A clear case in point is idolatry, the worshipping of idols. People become devoted admirers of pop singers, movie stars, religious leaders or politicians without them probably ever meeting their idols. It is a one-way devotion by the idolaters of their idols. Idolaters are avid collectors of all available information on their object of worship and they attach disproportionate weight to everything the idol does or says. Not surprisingly, idols are frequently used in commercials, to promote the sales of products, or in non-commercial campaigns to support a good cause.

Social relationships are embedded in the culture of a particular group. This culture defines the rules of conduct in particular contexts and for particular roles. A person plays numerous roles during a day, e.g. those of father, husband, lover, brother, son, employer and friend. There are certain communication styles that are associated with these contexts and roles. These styles differ in tone, jargon and communication rules. Compare for example communication styles at funerals and birthday parties, those between lovers and those between employer and employee. The contexts of funerals and work situations are very serious and the associated communication styles are formal and prescribed. Birthday parties are usually very informal. People mix freely, have social chats, play games, tell jokes and generally try to create a light-hearted atmosphere.

Using communication styles out of context is a sensitive issue and is often risky. In serious contexts it usually is an affront, like telling a joke at a funeral or making fun of AIDS victims in an AIDS campaign. In other contexts the use of unexpected communication styles may be humorous and funny. In a comic film or theatre play a scene in which a person cracks a joke at a funeral will probably work very well. Similarly, Mrs Thatcher addressing the Liberal Convention in Cockney would be unexpected, and therefore funny. Experienced public speakers who embark on a serious subject often begin their presentation with a short personal anecdote or humorous statement to 'break the ice'. The main purpose of this introduction is to put the formality of the occasion in perspective and to increase sympathy for the speaker. 'Playing around' with communication styles may increase the entertainment value of the communication events, but its appropriateness and success ultimately depend on the sense of humour and the feelings of the audience.

Group discussions are complex communication events in which social aspects play an important role. In village meetings people do not gather as a group of individuals but as clusters of social relationships. People depend on each other for economic, political or social reasons. Their contributions to the discussion will be determined by their position in the social network and by their interests. Sometimes personal interests are better served not by expressing your own opinion but by supporting the, perhaps opposite, views of the one you depend on for favours. The more powerful people in the village will dominate the discussion unless the less powerful decide to close the ranks and operate as one block. This rarely happens. The outcomes of village meetings can usually not be regarded as a consensus based on democratic principles but rather as an expression and sanctioning of existing power structures. Rural development programmes in which participation is propagated often begin with village meetings to get the support from the community. These meetings cannot be organized without the consent of the village leader and the plans will not be approved unless the more powerful agree. It would be rather naive to expect people to support programmes that potentially undermine their own power base.

Location

Communication is bound to take place in a certain location, be it a classroom, village square, living room, office or hospital ward. Locations exert influence on the process and outcome of communication, in a technical as well as psychological sense. The technical aspects refer to acoustic and visual circumstances which enhance or hamper perception. Interpersonal communication usually benefits from locations with few auditive and visual disturbances, enabling the partners to concentrate on the communication process. When people have something serious to discuss they withdraw to a quiet corner or meeting place. Individual farm visits either take place at the farmer's field or at his homestead. Group meetings take place in community halls, classrooms or training centres. The fact that people agree to meet in a quiet place is a clear sign of their interest in communication. The critical threshold for a hawker who goes from door to door to sell vacuum cleaners or life insurances is to be invited inside the home. Once that happens the hawker knows that his chances of success have increased considerably.

Certain gatherings require special technical facilities to make the planned communication possible. For big crowds, amplification systems are needed, film shows can only take place in halls that can be darkened, and theatre shows require arrangements that provide everybody in the audience with an unimpeded view of the 'stage'. Without these facilities parts of the audience will miss the message, loose interest and cause disturbances.

The point was raised above that interpersonal communication benefits from locations where people are not disturbed. Although this makes sense, based on the argument that a reduction of 'noise' enhances the effectiveness of communication, it cannot be regarded as a rule of communication. Youngsters feel perfectly at ease communicating in the middle of a jungle of deafening sounds and visual effects, also known as a discotheque. Men exchange news and do business in bars, rural women discuss matters while washing clothes in the nearby stream, and businessmen have serious talks over breakfast or lunch. Some locations, gatherings and activities apparently stimulate communication although the environments are full of disturbances. This brings us to the psychological dimensions of locations. Certain public places which can be regarded as places of social interaction stimulate horizontal communication, i.e. an exchange of views on an equal footing, like shops, bars, bus stations, social clubs, living rooms and waiting rooms. Others, by their size, construction and function mould communication into a one-way process as is the case in churches, community halls, lecture halls, court rooms and theatres. The selection of the location therefore correlates with the aim, format and style of communication. Take for example businessman X: he invites his new assistant for lunch in a restaurant. Over lunch the new assistant gets a chance to tell more about his previous work experience and his boss informs him about the activities and management of the firm. In the afternoon, X meets his accountant in his office to discuss the presentation of the budget at the next board meeting. After office hours he has agreed to meet his marketing manager in a bar, to brainstorm about strategies to promote a number of new products that are manufactured by the firm. The three locations differ in the degree of formality that is associated with them. The office is very formal, the restaurant is semi-formal and the bar is informal. The topics of conversation and purpose of the meetings correlate with these settings. Finances and policies are discussed in the office. The restaurant is a place to get to know each other better without becoming too informal. The informal setting of a bar and the pleasure of a few drinks are expected to stimulate creative thinking.

It is clear that locations have psychological effects on people, and development workers should, therefore, be careful in selecting locations for meetings. Maybe development workers can learn something from anthropologists. Anthropologists use 'participatory observation' as one of their major research techniques when studying a foreign community. This means that they observe and participate in the daily activities of the people. By experiencing the activities themselves, a better understanding of the function and meaning of the activities is gained, which leads to the formulation of relevant questions. The locals, on their part, notice that there is a sincere interest in what they do or think and feel more apt to respond. It is also easier for them to reply to questions which are directly related to what happens, rather than to answer abstract questions. The places where the people work and live are invariably the locations of anthropological fieldwork.

Although anthropologists primarily seek out information, it seems to me that the positive experiences with participatory observation carry some important lessons for extensionists. The first is that participatory observation enables an outsider to gain an understanding of what the people think and do, why they do it and how they do it. Secondly, participatory observation stimulates horizontal communication. If this is true, the point can be raised as to why a female health educator should ask women to leave their homes, gather in a hall and listen to a lecture, instead of her joining the women when they do their laundry in the stream and discussing health matters with them there and then. It may sound an impractical suggestion, but is it really? It is in effect perfectly in line with what has been discussed above and which more or less can be read to suggest that one selects a location for communication where people feel at ease and are stimulated to talk about and discuss matters. To further support this suggestion I will describe two related experiences. One involved Dr. Anceaux, a linguist at Leiden University, who found an excellent way to quickly learn a foreign language. In his early days, he had studied the languages of local tribes in Irian Jaya by staying in their villages for a while. Often he got frustrated because nobody seemed to have time to teach him the local language. During daytime the men went out hunting in the forests and the women were fishing or cultivating the gardens. After dark the evening hours were occupied by dinner and discussing community and family matters. And after that it was time to go to sleep. One day the linguist went to a nearby hospital and found one of the tribesmen hospitalized. He started to talk with the man and found out that the patient would stay in hospital for another 2 weeks. The linguist realized that he had found the ideal victim for his study: an immobile tribesman, bored to death, who was grateful for this opportunity to pass time by chatting to a stranger. Since that day the linguist radically changed his approach. Instead of putting up with villagers, he travelled from hospital to hospital in search of patients who were willing to teach him their local language.

'Desperate' to be interviewed
Photo: Roel Burgler

I remembered this story when I was producing teaching materials for health educators in Africa. The materials had to be pre-tested with a number of rural women, the target audience of the campaign. Going from homestead to homestead in the hope of finding women at home and willing to cooperate, seemed to be a very inefficient and time-consuming approach. Like the linguist I decided to go to rural clinics. Once every week, a nurse visited these clinics to attend to mothers and children. Invariably, most women arrived at the same time, forming a crowd outside the building. Sometimes the nurse would give a talk or they would pass time by chatting to each other in the shade of nearby trees. Like the 'victims' of the linguist, these women readily agreed to cooperate in the pre-test. For them it was a welcome diversion and an interesting (learning) experience at the same time.

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Timing

Timing is an important aspect of communication and has two dimensions: a) availability of the receiver, and b) appropriateness of the moment. The first dimension refers to whether people have the time to pay attention to whatever is communicated to them. In interpersonal communication, a receiver may tell the source straight away that he has no time for a chat at that particular moment. Consequently, an appointment can be made for a more convenient time. Mass media lack this flexibility because they broadcast their programmes at fixed times. A common complaint of farmers in developing countries is that agricultural programmes on radio or TV are broadcasted at times when they are supposed to be out in the field or when they prepare to go to bed. Prime viewing time, the time when most people tune in, is usually reserved for news items and popular programmes, sandwiched between commercials. Educational programmes including extension messages rarely get the time slots that would suit the audience best.

The second dimension of timing refers to the appropriateness of the moment of communication. In other words: is the communication event synchronized with the needs and circumstances of the moment. The importance of synchronization is evident in agricultural extension and in publicity campaigns. Agricultural activities are seasonal and cyclic and extension activities are synchronized with these recurring cycles. New plant varieties are propagated before the planting season starts, weed control practices become relevant when sowing begins and the reduction of post harvest losses is discussed when the crops start to ripen. Similarly, health campaigns are synchronized with the time of year in which certain diseases are most prominent. In the Northern hemisphere, influenza and pneumonia are diseases typical of the winter season. Campaigns to remind people of the dangers and to inform them about preventive measures therefore start in autumn. Advertisements for funeral insurances are broadcast more frequently during this season because elderly people have less resistance to these diseases and more people die in winter than in any other season.

The mental state people are in at the moment of communication defines their receptiveness to messages. A festive mood does not agree with listening to serious matters or problems. People who are in trouble are receptive to messages that may alleviate their situation. It is an established fact that churches are more crowded in times of war, disasters and economic depressions. In the Northern hemisphere, people more likely feel depressed in winter than in summer. Short daylight, bad weather and lower resistance all affect the spirit.

An example of inappropriate timing occurred during an evaluation in which I happened to participate. The team was expected to evaluate two educational projects in an Islamic country, and our visit fell during *ramadan*. We soon found out that planning an evaluation in this period had been a serious mistake. During *ramadan*, the minds of the people are occupied with fasting and family gatherings while work-related matters are pushed to the background. It proved to be very hard to make appointments with people in government offices. Many of them did not report to work, or entered at 10 am and left by 2 pm. The interviews we did manage to conduct took place in a very uneasy atmosphere, to say the least. The interviewees gave elaborate accounts of the fasting rules and how it affected their physical and mental capacities. They obviously could not concentrate on other topics of conversation, but the importance of the evaluation and rules of politeness forced them to sit through the meetings.

Duration

One of my history teachers at high school was very much aware of the limited span of attention of his pupils. He had read in a book on communication that people begin to lose attention after approximately seven minutes, when listening to a monologue. He had taken this to heart and disciplined himself to deliver the content of his lesson in seven minutes. The rest of the hour was spent on hearing homework and discussion.

The priest of one of the local churches had apparently not read the same book, as he was notorious for his long sermons. He could easily preach for more than one and a half hour without interruption. He shared this habit and zeal with Fidel Castro, but unfortunately lacked the talents of the latter to captivate the audience for such a long time. Increasingly, the menfolk of the parish flocked together on the benches at the back of the church, leaving women and children to occupy the front seats. As soon as the sermon started the men left the church one by one and met at the bar and barber across the street. A little boy was assigned to inform them when the sermon came to an end.

The span of attention of the receiver is limited and a source should be well aware of this fact. The source has the option to communicate his message concisely or to increase the span of attention by adding variation to the communication style and presentation. A lecture or extension talk will be made more lively and varied by using audiovisual aids and by creating opportunities for discussion. Radio programmes, like the feature and news magazine, mix various formats such as straight talks, interviews and fictional illustrations to achieve the same.

A considerable help in extending the span of attention is moulding a talk into a clear structure and introducing this structure to the audience at the beginning of the presentation. This has two advantages: it keeps the source on track and it provides the audience with a trajectory of interrelated 'paragraphs'. In this way the audience knows what to expect, which paragraphs have been covered and what is still to come.

Shared backgrounds

Despite all the pitfalls involved, people do manage to communicate. Whether they do this effectively is another matter. It is an established fact that communication is most effective between people who share the same background (social, economic and cultural), knowledge, experience, language and communication styles. Biological twins and couples that have been married for many years are examples of partners with overlapping backgrounds and experiences. They know each other so well that 'half a word' may suffice to communicate an idea. The opposite is true for people who have little in common. Effective communication between them requires an open mind, an interest to get to know each other and a common 'language'. The local community and the anthropologist are parties with extremely different backgrounds and life-styles. They know little about each other and speak different languages. The first things the anthropologist will do is to learn the language, establish relationships and develop trust. Mutual interest will gradually lead to a better understanding. This interest has one common denominator: curiosity. The anthropologist conducts research, which is the academic manifestation of curiosity. The locals have a genuine curiosity to know more about this stranger and his habits. Anthropologists who have done fieldwork always report on two items which illustrate this local curiosity. Firstly, the visitor experiences an absolute lack of privacy. He is followed anywhere, even to places where one retreats for sanitary purposes. People just want to know whether this stranger has the same needs and habits. Secondly, strangers are deliberately manoeuvred into delicate or possibly embarrassing situations. This is done in order to find out how the visitor will react and how competent he is at saving face. When the two parties have grown to understand each other better, and the anthropologist speaks the language, they are in a position to discuss and exchange ideas.

Summing it up

As we approach the end of this chapter, the lessons learned from analyzing communication barriers can be summarized in a few simple but critical points:

- effective communication is easier between people who have a lot in common and who have a considerable degree of mutual understanding;
- if this shared background and understanding are lacking, one or both parties in communication should take the responsibility to increase the level

of mutual understanding. This requires an open mind, a sincere interest in the other(s) and a common ‘language’;
- a communicator should take nothing for granted, but should continuously and consistently check whether his message is received as intended;
- feedback is an essential instrument to monitor and evaluate the effectiveness of a communication process.

To communicate effectively is difficult. There are too many variables that have influence on the outcome of the process. These variables can best be controlled in interpersonal communication where direct feedback allows one to check the level of understanding. It is important to remember that the understanding of people and the ways of expressing ideas have limitations. Some of these limitations are personal, others are cultural. People are moulded by their environments and experiences. They have difficulties in grasping ideas which they cannot relate to things they already know. The things they ‘know’ and the way they communicate these ideas are very much determined by the culture to which they belong. This topic will be further discussed in the next chapter.

5.
The influence of culture

Culture is confined to groups

In the early 1930s, three Australian brothers organized an expedition into the interior of Papua New Guinea in search of gold. At that time, the inland areas of New Guinea were still blank spots on the map of the world. No white man had ever explored the region. On their journey they discovered vast valleys enclosed by high mountains. To their surprise, these valleys were densely populated and it was estimated that about 1 million Papuans inhabited the interior. To the tribesmen the arrival of the three white men with their party constituted the first contact with human beings of another race, and their first awareness of another world existing beyond the mountain ridges. This first contact was a shocking experience for the native people. At first they thought that their dead ancestors had returned from the other world loaded with gifts for their offspring. But what puzzled them was the fact that their ancestors did not speak their language nor did they seem to know anything about the life and customs of the local tribes. Gradually they came to understand that the visitors were human beings alright but belonging to a different tribe and living in a faraway country (Connoly 1983).

Sixty years later such encounters are almost inconceivable. All corners of the world, except for the last pockets of tropical forest, have been explored. Economic activities and modern communication systems have drawn people out of their relative isolation and have made them aware of other societies and ways of life. Contacts between people around the world have increased tremendously and English has become the main language to allow people from all corners to exchange ideas. Products of the American media industry entertain millions of people from Vancouver to Jakarta while Coca Cola refreshes their thirsty throats. It seems as if, given time, the world will become one 'Global Village'.

But, appearances are deceptive. The ending of the Cold War gave hope to the world that an era of long-lasting peace would begin. Reality turned out to be different. The beginning of the 1990s is characterized by the crumbling of nation-states, the outbreak of civil wars, the rise of nationalistic feelings, religious fundamentalism, and open racism. Although many of these conflicts have economic undertones, the majority of them run along ethnic lines. Groups claiming to be of the same origin cling together to fight the 'others' who apparently assault, mistreat or discriminate them. As an individual, man fights for his survival and wellbeing. As a social animal he fights for the interests of his groups, for political and economic gains, but most importantly, for his cultural identity. With the other members of the group he shares ideals, customs, religious principles, values, rituals which regulate and define the relationships within the group and with the outside world. This complex of conventions and characteristics constitutes the culture of the group. An assault on the culture of people is even more serious than economic strangling or physical assault. It hits people in their very existence. They lose direction and purpose in life. The Australian Aboriginals and American Indians form two well-known examples of peoples that fell victim to cultural erosion.

Cultures change all the time, through innovations and contacts with other cultures. Some aspects of culture are more subject to change than others. Those lying in the economic sphere and those that form part of material culture are usually the first to change. The more enduring and conservative aspects of culture are those that are closely linked to the values and belief systems of the people.

In time, the number of cultures may seem to decrease because cultures merge or disappear. Differences may seem to diminish through contacts and cultural borrowing. However, cultural differences will always be there as long as there are distinct groups of people. The differences may not be as dramatic as in the meeting between the Australian brothers and the people of New Guinea, but big enough to matter, and to fight for if necessary.

Culture constructs reality

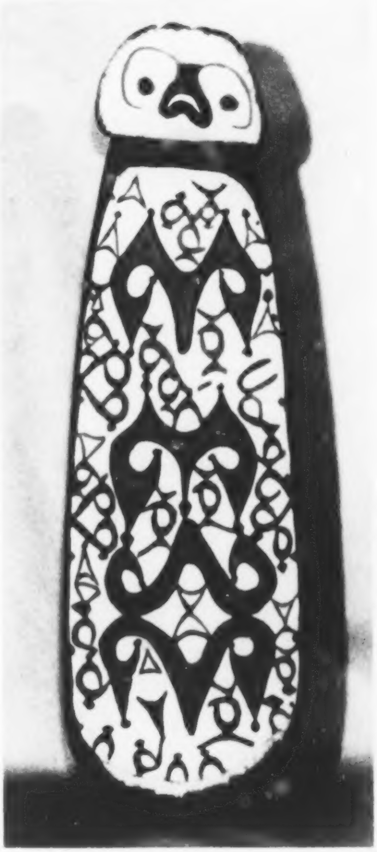
Culture helps a group and its members to cope with life in a particular environment and in a particular era. It contains deposits of knowledge and experience which a group has found useful and necessary for the survival of the group. The Eskimos living in the North Pole regions have developed a cultural system that allows them to survive in an extremely cold climate. Their living environment consists of ice, snow and water and their survival depends on fishing and hunting. In the olden days, their houses were made of snow, and weapons, clothes and utensils were made from the raw materials they obtained by hunting and fishing. Before they learned about other people and other parts of the world, they obviously had little knowledge, if any, about such things as trees and forests, agriculture and cattle, buildings and wheels. Without much effort one can imagine the huge differences in knowledge and experience between these Eskimos and, for example, tribes living in the dense, tropical forests along the Equator.

Not surprisingly, many scholars have felt intrigued by the influence of environment and living conditions on language and culture, and the influence of language and culture on perception. An important way for mankind to get to grips with the environment is by identifying and categorizing the things and phenomena that surround us, and to define their mutual relationships. Language allows human beings to name or 'label' these entities and phenomena and to communicate about them. Obviously, a language will only contain words for things, phenomena and relationships which are considered to be relevant and important, and which exist in the reality of a group. For obvious reasons, jungle dwellers have no word for snow, while Eskimos most probably lack words to denote forest or sand. The most-quoted anthropological example of environmental determinism stipulates that these Eskimos have an elaborate nomenclature for different types of snow - dry snow, slushy snow, flying snow - and 27 names for different shades of the colour white. Given the environment in which they live, a detailed and specific classification of these items is an essential condition for survival. By comparison, many studies have reported about the limited colour nomenclature of African languages. In Swahili for example, there are only three basic adjectives, namely *ekindu* = red in all shades and varieties, i.e. scarlet, purple, pink; *eupe* = white of any shade which, in addition, means bright, clear, transparent, clean, pure; and *eusi*: black of all shades including dark shades of blue, green and red. All other colours are expressed with reference to objects. *Rangi ya kunde* = colour of bean. *Rangi ya samawati* = colour of heavens = blue. *Rangi ya majani* = colour of leaf = green, etc. (Fuglesang 1982:35-36). Does this mean that Eskimos have better eyes than Africans? Certainly not, it merely indicates that Eskimos attach great importance to a refined differentiation of one particular colour. This detailed classification enables them to perceive and define the essential differences.

Colour nomenclature is only one, yet striking, example of how people may differ in the way they classify the surrounding world. In effect everything that is perceived falls victim to the classifying mind of man. An example is the classification of animals and plants. The scientific classifications of flora and fauna that are in use now are in fact very recent inventions coined by the work of Linnaeus and Darwin and based upon differences in genetic properties. Prior to these, Western classifications used criteria such as appearance and utility to distinguish and categorize the various specimen. In fact, these older classifications greatly resembled those of other cultures. Fuglesang (1982:16) once asked a Bemba woman 'How is a popo like a mango?' She replied: 'I can eat popo. I can eat mango'. To her the important point was evidently what 'use' she could make of a thing. It is another type of logic, but one which nevertheless makes sense. Why should a bat be classified as a mammal and not as a bird? They both fly and eat fruits. Why should ostriches and emus be classified as birds? They cannot fly, and there are many animals that are not birds and that lay eggs. We could go on with scores of trivial classifications.

The human mind divides the environment into entities and gives them names, but also links meanings to these entities which reach beyond their physical properties. Colours are not just labels for categories of light waves, but also denote feelings or situations. In many cultures the colour white stands for purity and cleanliness, but its use may vary among cultures. In the West white is the colour for weddings, especially apparent in the bride's gown. By contrast, in China white is a colour associated with funerals. Culture also attaches 'extra' meaning to animals. In Europe the fox is regarded as extremely shrewd and cunning, outwitting all other animals. In Africa this role is reserved for the hare, in Indonesia for the *kancil*, a very small deer. All cultures seem to ascribe human characteristics to animals, and sometimes people identify themselves with one or more particular animals. Clans often claim to descend from a mythical animal which serves as a totem of the group. Clan members call themselves after this ancestor and are prohibited to hunt or eat this particular animal.

The Asmat of Irian Jaya (Indonesia), who are former headhunters, associate strongly with the *wènèt* or praying mantis, the flying fox, the kuskus and certain birds. In Asmat thought the head of a human being is regarded as a fruit and headhunting as picking fruits from trees. Hence, fruit-eating animals are closely associated with headhunting. The association of headhunter with the *wènèt* is based on another type of analogy. After mating, the female *wènèt* apparently bites off the head of the male. In this act, life and death, killing and procreation are intertwined. To the Asmat, headhunting has the same connotations. The hunting of heads, i.e. harvesting of fruits, is a necessary condition for procreation. In former days newly hunted heads were a crucial object in initiation ceremonies of boys. The head allowed the transition from boyhood to that of manhood, i.e. to sexual activity and the starting of a family (Gerbrands 1967).



Asmat warshield with representations of 'headhunters'

Another example of analogies between humans and the environment comes from Tunisia. Jungerius (1985:5) quotes Jongmans who explains why data on agricultural production provided by Tunisian farmers cannot be trusted. In the 2nd Sura of the Koran (223) it is written that farmland and wife are the same. The analogy is felt very strongly. Wheat needs nine months to ripen, a woman needs nine months to carry a child. There is also a symbolic analogy; a pomegranate will burst and turn the soil red as soon as the plough enters the soil, symbolizing defloration. Wife, land, household, premises, they all form part of the farmer's private domain, they are *haraam*. This domain is forbidden ground for outsiders. A farmer will never talk about this domain in public except in general terms. Just as it is indecent to speak about one's wife, it is indecent to give particulars about the domain, for instance about the quantity of the crop.

Culture apparently 'moulds' reality. It determines what aspects of the environment will be classified, in which way they are classified and how objects, phenomena and ideas relate to one another. Each culture constructs its own 'reality', and no doubt this construct influences the way members of a culture perceive and understand the things and ideas they are confronted with in life.

Patterns of thought are culturally determined

Western modes of reasoning strongly differ from those of other cultures. Western culture is much indebted to the Greek philosophers, Christianity and the development of modern science. It is characterized by abstraction and universality, while other cultural systems tend to be more associative and particular.

One fundamental characteristic of modern science is the reduction of objects and phenomena to standardized units of measurement which are subsequently translated into figures which can be manipulated by way of mathematic formulas. Time, weight, speed, distance, volume etc. are all expressed in standardized measurement units. Distance divided by speed gives us the exact travel time; length, width and height of a house enable us to calculate its exact volume. To western educated people, this comes so 'naturally' that they can hardly imagine that one can look at objects and phenomena in a different way. However, the influence of modern science on Western thinking is of recent origin and did not gain ground without resistance. On June 22, 1633 the Italian scientist Galileo Galilei was forced by the Office of the Holy Roman Church to abjure his 'pagan' ideas and was sentenced to a prison term of indefinite duration. In his *Dialogo sopra i due massimi sistemi del mondo*, printed with the Church's permission in 1632, but banned immediately afterwards, he defended the ideas of the Polish canon Copernicus (1473-1543) who placed the sun central and the earth subordinate in our solar system. This idea undermined a view of the world which had remained unchallenged since the ancient Greeks and which also was felt to be strongly supported by the Bible. An attack on this time-honoured and religion-backed system could therefore not pass unchallenged. Hence, Galileo was sentenced and jailed. It took the Vatican 360 years to come to terms with Galileo's 'pagan' ideas. In 1993 the Vatican formally acknowledged that the Church had unjustly sentenced Galileo.

Much has changed since 1633 and nowadays few people with a western education will claim that the earth is flat or that our planet is the centre of the universe. Actually, this is rather strange. In everyday life our perceptions do not support this 'new' view of the world. Like our ancestors who lived before Copernicus' time we have the impression that our planet is flat and we have no immediate proof that the earth is not at the centre of the universe. Scientists made us belief that the earth is round, and consequently we abolished the doctrines of the Church. In other words: we swapped belief systems, and exchanged our trust in the Church for that in Science.

The two following examples of other measurement 'systems' show that there are different ways of looking at things, and that these make sense as well. Fuglesang (1982:34 and 35) quotes the following conversation about measurements in an African context: 'How big is your house, Godson?' Godson Handoma: 'I have a house for my ancestors, the wife and God gave me eight children, Bwana'.'Yes, I understand that, but what is the size of your house?' Godson: 'The house for my family is 15 paces, Bwana'. 'How can a house be 15 paces, Godson? How long is a pace?' Godson: 'The Headman, Mr Viyambo, does the pacing in the village, Bwana'. Fuglesang then comments that the question on the length of the pace had no relevance; why do you need to know how long a pace is when you know the man who did the pacing and even saw him do it? In Swahili a single word, *urefu*, denotes length, tallness, height, depth and distance. In the measurement system just described, the measurement unit and the concept of measurement are not standard, but depend on the situation and the experience of the observer.

Can strength be measured? What about weakness? The following compares two measurement 'systems' used to determine the strength of two tree branches, a thick one and a thin one. One of the systems is Western, the other is based on Taoism. A western scientist would opt for the experimental approach by hanging weights on the branches to determine their breaking point. The comparative strength of the two branches could then be expressed in figures about their carrying capacity. By contrast, a Taoist would approach the comparison from what he had observed in nature. This experience teaches him that a tree limb that is strong and does not bend eventually breaks under the increasing weight of winter snow, but the weak branch - the one that is limber and bends - gives way to the weight of the snow and lets it fall to the ground before enough can accumulate to break it. In the Taoist's view weakness is perceived as strength; strength is seen as weakness. In Tao this is rational (Samovar 1976:17).

Different perspectives exist in the field of health also. Western people 'believe' that infections and illnesses are caused by bacteria and viruses, in spite of the fact that these cannot be seen with the naked eye. Not so long ago, their ancestors thought these mishaps were caused by 'bad air', 'bad blood' or magic. These explanations very much resemble the beliefs still held by people in present-day cultures in many parts of the world.

The traditional method for manipulating events is through magic, and it is practised in all traditional societies. The methodology of magic is similar to science in its search for and understanding of the secrets of the repetitive but it fails, contrary to modern science, in establishing predictability of events. According to Fuglesang (1982:91) the magic world view is a world with a concept of 'causal relationships' based on the principle of likeness and simultaneity. The magic universe is one in which thoughts, things and events are identical when they are like each other. The thought of a thing is identical with the thing itself. The thought of an event can cause a similar event to happen, like in the following expressions: 'A pregnant woman should not eat fish. If she does, her foetus will slip out.' 'If you walk on Mr A's farmland he will cast a spell on you by picking up your footprints'.

Believing in the magic universe and the manipulating powers of magic is comparable to believing in the explanatory and effective power of modern science. The difference lies in the assumptions and concepts which underlie both systems. The systems are difficult to reconcile, as I learned from a campaign to promote sanitary latrines in Swaziland. In that part of the world, a sanitary latrine is a pit covered with a concrete slab with a hole in it, situated at the edge of the homestead. Depending on the means and diligence of the owner, a structure is erected to give the users some privacy. This structure can be made of reeds, branches or bricks. The idea of sanitary latrines did no go down well. The main stumbling block was people's fear of black magic. People's stool was one of the items which sorcerers used to cast a spell on a person. Hence, people relieved themselves in the bush, making sure always to choose a different spot. In this way they minimized the risk of their stool being traced and misused. A pit latrine would increase the risk. In the face of a determined and evil-minded sorcerer the self-made structures offered no safeguard. In fact, people thought that pit latrines made life more convenient for sorcerers than for them.

Obviously, in this case two conceptual frameworks clash. The Western and the magic system have different explanations for the cause of diseases, and different methods to prevent or cure them. In one system, diseases are regarded as disturbances in social relations, in the other they are seen as disturbances in bio-chemical processes. What is regarded as preventive behaviour in one may be regarded as risky or dangerous in the other. Easing oneself in the bush is preventive behaviour in the context of magic, but it is regarded as unhygienic in western medicine. Inversely, using sanitary latrines is preventive behaviour according to western medicine, but extremely risky in the eyes of people who believe in magic.

A solution to this conflict between two sets of preventive methods is the introduction of water-sealed closets which can be built inside the house or compound, and the introduction of sewerage systems. This would at least take away people's fear that their excrements are easy prey for sorcerers. It would not necessarily convert them to western medicine, which requires acceptance of its underlying assumptions, but it would remove a major stumbling block.

Are these traditional belief systems which help to explain and manipulate the physical world (therefore) inferior to the modern scientific ones? Maybe they are less effective in bringing forth physical results, but they can certainly compete with modern belief systems in their complexity and ingenuity. Traditional healers often have an astounding knowledge of the healing qualities of indigenous plants and a keen insight into the social relations and psychology of their patients. Fortunately, people are rapidly growing aware of the fact that instead of discarding traditional knowledge as backward, we can learn a great deal from what people have discovered over many centuries in their struggle for survival. Not only in the area of traditional medicine but in all areas of life, e.g. agriculture, social organizations, systems of law, conservation of the environment etc.

The structures of language and discourse

The differences between cultures in world view and thinking processes also surface in the structure of their traditional languages, rhetoric and discourse. Western cultures tend to conceptualize time in lineal-spatial terms, meaning that we are aware of a past, a present, and a future. Time is something we can manipulate, something we can save, waste, make up, or spend. Westerners place strong emphasis on time as an aspect of history rather than as an aspect of immediate experience. They treat the present as a way-station, an intermediate point between past and future. Other cultures are more concerned with immediacy or what is called 'felt' time. Japanese Zen treats time like a timeless pool in which events occur, cause ripples, and then subside. There is no past, no present, no future - only the event in the absolute present. The Navajo concept of time assigns reality only to the immediate; thoughts of the future are not worth much consideration. The Sioux Indian presents an even greater problem; their language does not contain words for time, lateness, or waiting (Samovar 1976:20-21).

With regard to differences in discourse, Harder (1989:26) identified a characteristic tributary structure in Japanese expository prose. In this structure, different topics can be introduced as in a river system with tributaries flowing into each other, beginning from many different points in the landscape, or in the development of the idea. This structure tends to be confusing to American readers because the logical connections are not clear until the end of the essay and are often only implied. Japanese students, on the other hand, were most uncomfortable with the rules laid down in handbooks on style in the English language. They felt that the real heart of their thoughts could not be expressed by them following these rules. To them, English structures were too direct, too assertive, too individual and as such in conflict with the cardinal devotion of the Asian mind to the related concepts of unity and harmony.

Western cultures are much more individual-oriented, and the individual is encouraged to develop his personal talents and strive for personal happiness. These marked differences in value orientation regarding the role of the individual and social relations exert considerable influence on communication styles and communication conventions. Based on a rich body of literature on the topic of cultural variability and communication, Gudykunst and Ting-Toomey (1988) correlate individualism with higher tolerance for uncertainty, less formality and low power distance between people. In cultures with an 'individual orientation', communication tends to be explicit and direct, while in cultures with a 'collective orientation' it is more implicit and ambiguous. The orientation on the individual stresses informality and symmetrical power relationships in communication, while the collective orientation emphasizes formality and asymmetrical power relationships. The Japanese language tends to put conversational members in the proper role/positions and in the proper status/hierarchical levels, while the English language tends to emphasize the 'personhood' of the conversationalists.

Languages with an individual orientation tend to be more instrumental, sender- and goal-oriented, as opposed to those with collective orientation which tend to be more affective, receiver- and process-oriented. *Haragei* (*hara* - belly, and *gei* - sensitivity or subtleness) is referred to as the Japanese way of communication. *Haragei* means heart-to-heart communication, or guessing the inner thoughts of the other. The affective-intuitive style of the Japanese verbal communication pattern places the burden of understanding on both the speaker and the listener. While the Japanese speaker actively monitors the reactions of the listener (receiver orientation), the listener is expected to display intuitive sensitivity towards meanings beyond words. Verbal expressions are presented only as hints to reality, but they are never expected to be perceived as accurate facts that capture the totality of reality. This view on communication integrates the roles of speaker and listener into a highly interdependent relationship. By contrast, in individual-instrumental communication styles, speaker and listener are segregated into distinct categories. The speaker consciously and explicitly constructs his message for the purpose of persuading or manipulating the receiver (Gudykunst 1988:112-113).

The power of values

Culture has a strong influence on what is communicated and on the way in which it is communicated. Instrumental in this are values, which consist of broad beliefs of central importance to which a strong emotional and moral worth is attached. Values serve as forceful guidelines to direct the thoughts, judgements and behaviour of members of a society. The following story introduces the nature and influence of values quite forcefully.

Marshall Singer (1987:162) once posed the following hypothetical problem to a multinational group of trainees he was teaching: Suppose you are on a ship that is sinking. Your mother and your wife are also aboard the same ship. There is only one lifejacket and you cannot keep it for yourself. To whom will you give it? Two of the participants responded immediately and almost involuntarily, saying 'no question,' while a third said aloud, 'God forbid'. Since one of the two who said 'no question' was from Britain and the other from Egypt, Singer sensed that they may not have meant the same thing by their verbally identical response, so he asked them to elaborate. The gentleman from Egypt said, 'Of course I would give it to my mother. I have only one mother and I can always get another wife.' Whereupon the Englishman said, 'Oh my God,' and went on to say, 'Look, I chose my wife. I had nothing to say about whom I was born to.' These answers gave rise to a heated discussion about why each value system was superior to the other, which of course convinced neither. The gentleman who said 'God forbid' was from Lima, Peru. For him both role identities (as son and husband) were equally ranked, and he would face great difficulty trying to decide between the two.

Values are directly related to the way people see their relations to the environment, the supernatural and their fellow group members. Values determine how people consider the innate character of man, and how they define the purpose of human existence. Under the influence of Greek philosophy and Christian religion, Western culture has developed a number of distinct characteristics: it is very individual-oriented, considers life to be a gift from God, and places man at the top of the living world - nature is a resource that man can use at will for his personal achievements. In Asian cultures, the worth of an individual is not measured in terms of his personal achievements but in terms of his endeavours to promote the wellbeing of the group to which he belongs. The group takes care of the individual in exchange for loyalty. Group orientation necessarily requires an elaborate system of prescribed roles and rules of conduct. This system teaches the individual exactly what is expected of him and minimizes the risks of undesired and unpredictable behaviour.

Consequently, relationships and communications between people tend to be very formal, certainly compared to those in Western cultures. The purpose of life is expressed in terms of becoming, as is especially evident in Zen Buddhism. A person should strive to develop the self, to uplift himself spiritually, rather than to concentrate on worldly matters.

Unity and harmony may also be expressed in the relationships between man and his environment. Many cultures do not regard man as the king of the universe but prefer to see the human race as the *primus inter pares* of the living world. This is especially evident in those societies which have to survive with modest means in a hostile environment. These societies are dependent on the 'benevolence' of nature to subsist and survive. With the help of magic they try to keep 'good relationships' with flora, fauna and weather conditions, all of which they regard and treat as members of the family or neighbours rather than as inanimate utilities.

Values tend to correlate, and form integral parts of particular cultures. 'Individualism', 'achievement orientation' and 'nature dominance' go together and are dominant in Western culture. 'Collectivism' and 'harmony orientation' are more characteristic of Asian cultures. This does not imply, however, that there is no harmony or collectivism in the West, or that there is no individualism or achievement orientation in the East. Certain value orientations predominate in particular cultures and these values have a central position in the thoughts and behaviour of the members of those cultures.

It is important to note that value systems are rarely consistent or homogeneous. A strong value in the Christian West is the inviolability of the right to live. Life is God-given, and only God can decide on its termination. In the practice of life this core value comes into conflict with two other important values, i.e. the right of self-defence (in situations of assault or war), and the right of living a worthy life (granting abortion to a girl who has fallen pregnant because of rape; prematurely ending the life of a terminal patient). The heated debates which take place in the United States and Europe about the legalization of abortion and euthanasia clearly illustrate the conflicting nature of these values, and the moral and emotional importance attached to them.

Values are human inventions, and are shared by members of a group. Since most nations are composed of different ethnic, cultural, social, political and economic groups, value conflicts are bound to occur between groups, between individuals and within individuals. At the national level, value conflicts come to the fore in the political arena: democracy versus totalitarianism; capitalism versus communism; religious principles versus economic models; majority rule versus minority sensitivity, etc. These issues are clear expressions of different value orientations. Conflicts of this sort also occur between people belonging to different groups or cultures. They may disagree because they hold different political convictions, belong to different religions, have different attitudes towards treating fellow citizens, think differently about privacy and neighbourliness, etc. Individuals may experience conscientious conflicts because they belong to different groups whose value systems are incongruent. Conscientious objectors cannot reconcile their moral, religious or political values with their national duty to defend the country by joining the army. Working mothers feel the tension between the responsibility they are expected to take for the upbringing of their children, and the desire to pursue a career or the need to secure a sufficient income. Medical practitioners may be confronted with dilemmas which involve a conflict between their professional ethics, professional judgement, moral values and religious considerations.

Values are extremely influential, and we let them determine, consciously as well as unconsciously, our lives both in important and trivial matters. Values are responsible for the inferior position women have in most cultures; for the plight of the untouchable caste in India; for chauvinism and racism; for nationalism and ideological/religious imperialism; for exploitation and competition. Other values are responsible for cooperation and mutual assistance; social justice and equal opportunities; tolerance and peace; progress and development. At a more 'trivial' level, values help us determine what we are allowed to eat, how we spend leisure time, with whom we associate, what music we appreciate, and how we treat pets. Although these issues seem of little importance, their emotional value often equals that of central moral issues. The following anecdote may illustrate this. Recently the British government tried to pass a law that would order the termination of all pitbull terriers in the country. This measure was proposed because over the past few years many accidents have happened with these animals. Children have been attacked and even killed. Following the announcement, a storm of protest was heard. Owners of pets and members of the Society for the Prevention of Cruelty to Animals condemned the measure as being immoral to the animals and to the owners of the pitbulls. Eventually, government watered down the law by only forbidding the breeding of the animals. For people from developing countries this may sound absurd. But for those who are familiar with the love British people feel for their pets and have seen pet cemeteries which are often more luxurious than those for the human dead, know how strongly this attachment is felt.

Because of the importance attached to them, values exert great influence on one's determination of what will be communicated, to whom, and in what way. In many cultures it is polite not to state explicitly what you have on your mind, which is quite common in Western cultures, but to say it in a roundabout way. Oriental cultures are famous for this, yet indirect speech is also practised in other parts of the world. The whole issue of indirect speech can be traced back to values people have about respect and social relations. People treat others with respect because of their position, their status, their wisdom, their age, because they are visitors, etc. The way we receive people, pay attention to them and speak to them expresses our feelings of respect. These signs of respect can be expressed in speech and in behaviour. Other signs are not directly perceivable and consist of the things not said and not done, things that may harm or embarrass the other. By restraining ourselves we avoid the person possibly 'losing face'.

Respect for social relationships also determines communication patterns in Africa. According to Boafo (1990:5), communication in traditional African communities is a matter of human inter-relationships: "In (...) rural settings, communication is almost always a question of attitude to one's neighbour. Therefore, acceptance or rejection of information and new ideas is dependent on how such an action will affect established relationships which, invariably, have been shaped by the culture. When communication is vertical, it follows the hierarchical socio-political positions within the community. Consequently, what a person says is as important as who he is; both the *what* and *who* are generally in consonance with public expectations or societal norms. In other words, statuses within the community carry with them certain cultural limitations as to what to say and how to say it. Horizontal communication is based on a number of criteria among which are age-grades, occupation, geographical proximity and ethnic affinity. Basically, therefore, communication is carried on strictly according to the established norms and mores of the community."

The influence of values on what will be communicated is most evident in the case of taboos: i.e. things, practices or ideas that are avoided or prohibited by social custom. Until recently, in Europe it was not done to openly discuss certain illnesses or topics at social gatherings. Certain illnesses were considered to be 'shameful' (this strangely enough included cancer and tuberculosis) and these were talked about without them actually being named. Indirect speech was used to convey the matter. Equally tabooed were all topics that have to do with sexuality and reproduction.

In less than thirty years, since the 'sexual revolution' of the sixties, sexuality has become a topic of public discussion in Western Europe. No doubt the declining influence of religiously inspired morality has contributed a lot to this turnabout. Nowadays, radio and television programmes, magazines and newspapers openly discuss issues such as contraceptives, the role of sexuality in marriage, rape, incest and AIDS. Three decades ago this would still have been unthinkable.

In many parts of the world these issues are still tabooed for public discussion. In Africa, it is still difficult to discuss the issue of family size in public. Family planning and contraceptives are regarded private matters, and can only be discussed between husband and wife, or between patient and doctor/nurse. Campaigns necessarily confine their messages to the propagation of the advantages of child spacing, without openly referring to contraceptives.

The messages include directions where further information can be obtained if people are interested in the practice implied.

Values are felt so strongly that they interfere with the 'objectivity' of our perception. A striking example of this is given by Singer (1987:8). He once invited a number of friends to a party and on a table he had displayed a whole array of cheeses and other edibles. Without saying anything to anyone he had placed a little white dish with fried caterpillars along with the other foods. Then he waited to see what would happen. Halfway through the evening one of the unsuspecting young ladies he had invited came up to him and said, 'Marshall, those fried shrimps you put out were delicious.' 'Fried shrimps?' he asked as innocently as he could. 'I didn't serve any fried shrimps.' 'Yes you did,' she insisted. 'They were in a little white plate on the table. In fact, they were so good I ate most of them myself.' 'Oh,' he said, pausing for maximum effect, 'those weren't fried shrimp, they were fried caterpillars.' At virtually the exact same moment he said that the smile disappeared from her face, her complexion turned markedly green, and she proceeded to become terribly sick all over the living room floor.

How does one explain the fact that food that is considered to be so delicious at one moment - when it is perceived to be fried shrimp - could be so repugnant the next, when it is perceived to be something else? The answer is simple: values.

People not only subject what they taste to value judgements, but also what they hear, smell and see. The latter I experienced when testing a number of photographs with rural people in Africa. Some of the pictures were immediately 'rejected' because they were considered to be 'ugly' or 'indecent'. Pictures of malnourished children provoked a strong reaction of aversion. People would turn away their heads, holding their hands before their eyes. The interesting thing was that women who carried children in the same condition showed an identical reaction. They did not see any resemblance between their child and the one in the picture. To them, the child in the picture looked very much worse and pitiful.

One of the photographs was the one shown on the next page. It depicts a scene of a girl reading a newspaper to her father. No one expected this picture to meet any objections or negative comments. However, the tests proved that one detail had been overlooked: the girl is sitting with her legs slightly apart. All people who were shown the picture strongly criticized the girl. Her sitting like this was considered to be very indecent. Since people were so much focused on this detail, they completely ignored the rest of the photograph.

The people also looked at the pictures with certain aspirations and ideals in mind which had an impact on their judgements. Photographs which depicted life in the rural areas as it was were not particularly liked. People criticized all

Indecent behaviour
Photo: Ad Boeren

sorts of details which were actually quite common in their neighbourhood, e.g. children walking without shoes, uncombed hair, torn clothes, cracked walls and unkept fields. They definitely preferred photographs which showed a familiar world but one in which things were slightly better than in their own.

In this respect, rural people in Africa are very much like their rich counterparts in the West who buy glossy magazines, read romantic novelettes and watch exotic movies to feed their aspirations and dreams. You only have to watch one block of commercials on television to realize the strong influence of aspirations, dreams and values on life, on what is communicated and on the way it is communicated. To illustrate this I will try to describe a Japanese television commercial which was shown many years ago and which promoted the services of a life insurance company. The commercial impressed me because of its powerful simplicity and because it consisted of only one shot. It starts with a little girl dressed in white, holding hands with a man, apparently her father. Since the camera is positioned at some height, the couple is seen slightly from above, standing on a white floor. Then the camera zooms out (moves further up and away). At that moment the man lets go of the hand of the girl and walks off screen. As the camera is moving further away, it becomes clear that the white floor is only a small white circle surrounded by a

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solid black plane. Gradually the little girl standing all alone in her white circle becomes smaller and smaller, while the black increasingly fills the screen. When the camera stops moving, the girl starts crying. It sounds as if she is standing in a huge empty building. The name of the insurance company is projected over the picture and then the shot ends.

Without using a single word the commercial drives home the message loud and clear. The loss of her father will leave the little girl helpless and surrounded by a threatening and impersonal world. The loss is illustrated fairly simply by the man letting go of her hand and walking off screen. The consequences of the loss, however, are emphasized by the use of powerful symbolic visual images. The retreating camera symbolizes the process of abandonment, while the encroaching black symbolizes confinement, threat, and love forsaken. The commercial also strongly appeals to Japanese values on social relationships: the individual can hardly survive without a group. The loss of her father destroys the social group and security of the little girl. This is vividly symbolized by the shrinking of the white circle in which she stands, i.e. her social group.

It is also interesting to note that the last image of the shot very much resembles the outlines of the Japanese flag, be it with different colours. The Japanese flag depicts a red circle, representing the sun, centred in a white rectangle. The commercial closes with a white circle in a black rectangle. It would not surprise me if, unconsciously perhaps, Japanese viewers perceive this last image as an unpleasant inversion of what symbolizes Japan and the values of its people. If this is true, the white circle in a black rectangle would render extra strength to the message of the commercial. As such, it would represent something unwanted, something contrary to Japanese values and ideas. And, no doubt, the breaking up of the group is something very much unwanted in Japan.

Roles

Around the globe, the more fundamental denominators of people's roles are gender, age and position. Despite the efforts of the women's liberation movement and legal regulations to ensure equal rights and opportunities for women, the primary role of women is still seen as that of mother and housewife. This situation persists despite the fact that in the West nowadays there are more female than male university students, many women hold responsible jobs, or earn the family's income. It is well known that in Africa the women are the main farmers producing the crops which the family needs to survive. It is also well known that, in spite of this fact, agricultural extension officers neglect or avoid female farmers and concentrate on the men who only prepare the land or grow cash crops. A study on an agricultural development programme in Cameroon gives some clues about the underlying reasons (Koons

1987:350-52). Although the study showed that receptivity to information was similar for men and women, there were gender differences in the contacts these men and women had with extension officers, in their knowledge of recommendations, and adoption. According to Koons, this was because the standards governing communication were differentiated according to sex, age and status. The lower social status of women played an important role in the attitudes which governed gender-based behaviour.

Women's limited access to extension was apparently imposed both by their own ideas and understandings, and by the observed lack of access imposed by the attitudes of the extensionists. As in many African countries, Cameroonian farmers do not consider public services a right but a scarce commodity, which is controlled by the personal objectives of officials, and must be earned by the recipients. The behaviour of the Cameroonian female farmers suggested that they did not believe that they had 'earned' extension services. Their perceptions about earning access were related to ideas about personal status and the status of agricultural activities. Farmers made status distinctions between the crops grown by men and by women which, in turn, influenced the contacts. Home consumption crops were old and established, and had been grown by using old and simple methods, had only secondary cash value, were cultivated chiefly by women, and thus had low status. Coffee, grown as a cash crop, was relatively new, required modern scientific techniques and inputs, had a cash value used to purchase modern goods, was considered to be grown exclusively by men, and thus had a high value. Therefore, female farmers believed that the importance the government placed on modernization and advancement indicated it was much more interested in 'men's crops' than 'women's crops'. Women had seen many years of extension concentrated almost solely on the men's coffee farms, and often on the biggest, most successful of those farms. As a result, many women, especially older ones, did not believe that they qualified for, or deserved attention. They thus felt unable to request individual assistance such as additional information, clarifications, and farm visits. In addition, women did not normally ask high-status individuals for things, and especially not those of such high status as the extension workers. They just waited and took what they got. Women's apparent lack of interest in extension was interpreted by the extensionists as resistance to change and confirmed their idea that it was useless to try to reach the women because of their failure to request visits.

Another gender-based factor which hindered communication was ambiguity in the rules which applied to the interaction between extensionist and female farmer. Women and extension workers did not know the rules or appropriate protocol for a situation in which a man who was not a husband was advising, but not commanding, a woman. The extensionists did not know what tone to set and the women did not know the proper response. Both parties were uncomfortable and to a greater or lesser degree avoided the situation. Female extensionists were more successful in their interactions with women in a manner which was sensitive, patient, and encouraging, and female farmers felt less intimidated by them than by male extension workers. However, Koons (ibid.:353-354) observes that their training and role had taught these female officers a 'progressive' perspective and they too sometimes got frustrated with women and accused them of resistance and ignorance.

Koons also mentions that rules for communication between genders inhibited interaction between the extension officers and farmers in mixed groups. Neither gender was able to be as open or as expressive, or discuss problems as easily, in the presence of the other. Although Koons does not elaborate on these rules which govern communication between genders we know that they exist in all cultures. In some cultures they are more explicit than in others. In her Burundi study, Albert (1966; cf. Koons:30) notes that boys are taught the effective and appropriate verbal responses for 'speaking well', as well as voice modulation and tone. Girls are taught 'artful silence'. Speaking in public is considered unseemly for women and they speak when spoken to but otherwise remain silent in public.

Everywhere in the world there is a difference in upbringing between boys and girls. From the moment they are born, boys and girls are socialized according to the roles they are supposed to play in adult life; for the boys it is usually the role of father, protector and provider, for the girl that of mother, housewife and nurse. Boys and girls are taught different things and interests are bent into different directions. Within a few years, boys and girls have adopted two different cultures: the 'male culture' and the 'female culture'. Each of these cultures has its particular knowledge, behaviour, standards, rules and communication styles. Communication between men and women differs, in content as well as style, because they live different lives, play different roles and because communication serves different purposes. According to Tannen (1990), who studied differences in styles of speech among men and women in the United States, women communicate for the sake of 'rapport' (the quality of the relationship), while men are more interested in 'report' (the exchange of information). For men, language is a power tool (to stress their own importance and to check and balance hierarchy and status), while women see it as an instrument to create involvement with. This difference correlates with what we have discussed above about goal-oriented versus process-oriented, instrumental versus affective communication styles.

A universal stereotype holds that women gossip a lot, and that they do this much more frequently than men. Tannen (1990) argues that men misunderstand the purpose of gossiping among women. It is not because women want to pull down others, but because it is a sort of philosophical investment. Through gossip, women balance things for themselves while examining somebody else's behaviour. It helps them decide how to live their life, and what sort of decisions they should take. Another stereotype holds that women are very talkative, especially among friends and relatives, and at home. Many women complain that their husbands do not want to make conversation when they return home from work. They hide behind the newspaper and watch television (another stereotype). The following joke is based on these stereotypes: a couple files a request for a divorce. The judge asks the lady the reason for this request. She answers: 'My husband hasn't been talking to me for the past two years'. The judge asks the husband whether that is true. He replies: 'Yes, I didn't want to interrupt her'.

Tannen implicitly sees the world of men and women as two different cultures which explains the communication problems existing between the genders. The title of her book underscores the gravity of the problem: *You just don't understand*.

The roles which people play, and have learned to play, determine the communication patterns between people. Communication interactions require some 'protocol' of codified rules specifically appropriate to the interacting individuals and the particular situation. The behaviour of an individual according to his status provides cues and clues to another person about the appropriate communication protocol, or rules of discourse, with regard to speaking order, response, and speaking style. Individuals learn these rules and styles in a variety of roles as superiors and as subordinates. We all know this from our own experience: we speak differently when we address our parents or our children, a man in authority or our neighbour, our wife or other women, when we order someone or when we make a request, when we lecture or socialize, etc. Our role and position in a particular situation determine what we say and how we say it. Consequently, every human being has a whole repertoire of communication styles and he chooses the one which is most appropriate given the nature and purpose of the communication event and depending on his role and position in the prevailing social process.

Cultural differences based on ethnic differences complicate matters further. According to Samovar (1976:17), differences in role prescriptions caused considerable embarrassment among American soldiers and English girls during World War II. The American soldiers, when dating at home were used to being told 'no' by American girls. In England, however, they were confronted with girls who were used to men not making advances unless seriously intended. Now English women found themselves dating Americans who were used to making sexual advances until told to stop. But, the English girls had never learned to say 'no' and perceived the advances as signs of serious intentions.

Communication is culture

As a matter of course, communication and culture are 'condemned' to a symbiotic relationship. Communication is a product of culture, and culture determines the code, structure, meaning and context of the communication that takes place. On the other hand, communication is the vehicle and lifeline of culture. Without communication no culture can survive (Boafo 1990:4). One might even argue that without communication culture does not even exist and, therefore, some scholars go as far as putting culture on a par with communication.

Each culture constructs its own reality. It defines the things and phenomena in the surrounding world, categorizes them and gives them meaning. It determines how its members see their relation to the environment, the supernatural and their fellow group members. It prescribes values and rules of conduct for its members, guiding them in social interactions.

When people rebel against their culture their actions focus on the conscious aspect of it, like certain rules of behaviour, traditional practices, norms, etc. Difficult to touch are those aspects of culture which are ingrained in the more unconscious levels of the mind. These include strongly held beliefs, moral values, and especially the ways in which culture has categorized and defined the surrounding world. These more unconscious levels have an enormous influence on the way people interpret their social and physical environment and shape their 'reality'. The next chapter gives examples of this. It discusses the influence of culture on the perception of visual materials.

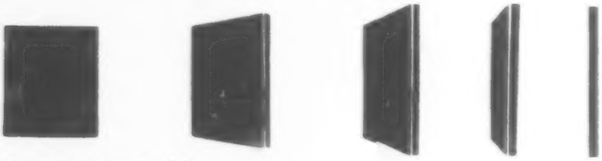
6.

Visual perception

There is little objectivity in the way people perceive the signs around them. People give meaning to whatever information comes to them on the basis of what they already know and what they believe. Singer (1987:9) defines perception as a process "by which an individual selects, evaluates, and organizes stimuli from the external environment. Perceptions are the ways in which a person experiences the world". That 'world' includes symbols, things, people, groups of people, ideas, events, ideologies, and even faith. In sum, we experience everything in the world not 'as it is' - because there is no way that we can know the world 'as it is' - but only as it comes to us through our sensory receptors.

The perception of a stimulus takes place at the expense of other stimuli. What we perceive attentively impinges on our consciousness in an isolated way. This does not mean that all other sensory impressions are lost. They form a vague background with more or less distinctive details. When our selective perception moves from the unconscious to the conscious, it is called concentration. Attention is our perceptual focusing on selected stimuli as a conscious action while background stimuli are being monitored continuously by our sub-consciousness in a state of preparedness for sudden change or significant new information (Fuglesang 1982:146).

Experience and memory play an important role in perception. We see things, to a great extent, on the basis of our memory of these things ('data-storage banks'). We display a tendency to see objects at a constant colour intensity despite variations due to different light and shade conditions (colour constancy). We also tend to see an object as retaining its shape in our perception even if the object is transformed right in front of our eyes, for example a window which is swinging open (shape constancy). Although the shape of the window changes during this movement, we perceive the window as rectangular, because we see it with our memory.



From: Fuglesang, 1982

Perception is a quality of the individual, and no human being will perceive in the exact same way. However, every individual has a great stock of cultural perceptions, i.e. culturally conditioned perceptions, which he shares with other members of the group to which he belongs. Examples of learned perceptions are symbols. Take for example the + sign. Singer asked an international group of students what this sign meant to them. The two most common answers were 'cross' - in the religious sense - and 'plus' - in the mathematical sense. Other meanings offered were 'crossroads', 'quadrants on a map', 'the hands of a compass', 'Red Cross' and 'the sign for Switzerland'. When he did the same exercise with a group of Latin American civil servants virtually every answer suggested Latin Catholic romantic symbolism: 'death and transfiguration', 'life after death', 'love', 'sacrifice', 'eternal life', 'suffering', etc. On another occasion, at the University of Malaya in Kuala Lumpur, virtually every student of Chinese extraction saw the symbol as the Chinese number ten because that indeed is the way the Chinese write the number ten (Singer 1987:17).

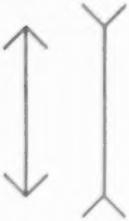
Cross-cultural studies on perception

Since the beginning of this century, scholars have shown an interest in the cultural variability of perception. The research work which has been done followed two main approaches - one in which investigations were carried out into pictorial perception, seen as a perceptual habit which develops and persists as a result of ecological determinants, and the other, in which studies were made of the difficulties which non-western people encounter in the perception of pictorial material prepared in the Western manner and containing Western representational conventions (Duncan et al. 1973:3).

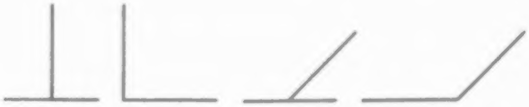
The first approach, which focuses on cultural variation in the perception of standardized visual representations, has the longest history. The Cambridge expedition to Torres Straits (1901) was, historically, one of the earliest cross-cultural endeavours. The objectives of the research done by Rivers and other pioneers in this field were heuristic in nature. They wanted to find out whether visual illusions to which Western populations were susceptible would have a similar effect on the natives in remote parts of the world. Later studies were based on a hypothesis proposing that perception of these illusions is subject to cultural, ecological or genetic influences, and groups were identified to test this hypothesis. In the course of time, two illusions in particular were thoroughly investigated: the Horizontal-Vertical illusion in all its variants, and the Muller-Lyer illusion (Deregowski 1980:3).

In both illusions, subjects are asked to indicate which of the lines is longer: the horizontal or vertical one or, as in the Muller-Lyer illusion, the left or right vertical line. Tests with Western audiences had shown that many Westerners perceived the vertical line of the Horizontal-Vertical illusion to be longer than the horizontal one; and the vertical line on the right in the Muller-Lyer illusion to be longer than the one on the left. In both illusions the compared lines are in fact of equal length.

Muller-Lyer figure



Various versions of the 'Horizontal-Vertical' illusion



From: Deregowski, 1980

It was hypothesized that people living in dense forests would be less susceptible to the Horizontal-Vertical illusion than people living in open plains, because in the forest, the horizon is as far as the nearest wall of green jungle, whereas in the open field people have to estimate distances by comparing the relative sizes of far away objects. C.M. Turnbull, an anthropologist who lived with the BaMbuti in the Congo for a period of time, recounts a story which illustrates this point (cf. Fuglesang 1982:148). He brought a tribesman from his village deep in the forest into open savannah for the first time. When the Mbuti tribesman saw a herd of buffalo grazing some miles away, he asked what kind of insects they were. When he was told they were buffaloes, he reacted with alarm and refused to believe it. As the Land Rover approached the herd, he observed that the insects were growing steadily in size and thought he was under a magic spell. Fuglesang comments that this spell was, of course, his complete lack of perceptual experience with horizontal distance. He was familiar with cows, but not with cows at a great distance. His visual environment was the rain forest where giant trees are closely and randomly positioned.

It was also hypothesized that people living in cultures where rectangular shapes are dominant (the 'carpentered world') would be far more susceptible to the Muller-Lyer illusion than those dwelling in a non-rectangular environment. To people familiar with rectangular buildings, the figure very much resembles an arrangement of lines similar to what can be observed in the intersections of a floor, walls and a ceiling inside a room. Although we know that the angles are right in reality, we perceive them from a distance as being arrow-shaped. Hence, in cultures were such angles are dominant, one would expect subjects to interpret other angles as right angles whenever ambiguous angles are encountered. In the cultures where right angles are rare, one would expect no such misperceptions (Deregowski 1980:13).

In spite of some contradictory findings, the research carried out supports the hypotheses, i.e. cultural and ecological factors exert influence on perceptual habits.

The second approach, which is of more recent origin, confronts people of non-western cultures with visual materials prepared in a Western manner and containing Western conventions to represent reality. The considerable volume of research done in this field consists of carefully controlled academic studies as well as reports by developers of material, mostly Westerners, who describe their findings and experiences of producing training and extension materials for audiences in developing countries. A comparative study of pictorial perception among Bantu and white primary school children in South Africa (Duncan 1973), and Deregowski's studies on pictorial perception in Zambia belong to the first category.

The studies and reports make fascinating reading for a number of reasons. Firstly, they reveal how people who are not familiar with printed materials look at pictures and drawings, and how they try to give them meaning. Secondly, in doing so people reveal their perceptual habits, their values, their likes and dislikes. Thirdly, their reactions uncover the cultural codes which Westerners use to depict reality.

A number of authors have attempted to compare and compile the major findings of applied perception research, focusing on difficulties which rural audiences in developing countries encounter in interpreting visual materials. In presenting these findings I rely on the publications of Cook (1979), Haaland (1984), Colle (1986) and Ramm (1986) as primary sources, supplemented with findings of other studies and my own experiences gathered in Swaziland (Boeren 1982).

The audiences studied are the so-called 'pictorially inexperienced persons' who have the following characteristics in common: they

- are functionally illiterate;
- received little formal schooling;
- have limited exposure to pictorial materials;
- communicate primarily by aural/verbal means;
- live in isolation due to insufficient transport and communication links (Colle:159).

These characteristics apply to many rural people in developing countries, and are especially common among adults.

Major findings

When confronted with visual materials such as photographs and drawings, pictorially inexperienced people tend to display the following reactions and behaviour:

1. First they regard visual materials as objects, then they start to see whatever is depicted.
2. They focus on details, or parts of a picture, rather than on wholes.
3. People give meaning to whatever is depicted on the basis of what they know, believe and are familiar with.
4. They do not understand pictorial conventions, such as perspective and implied movement.
5. They lack precision in estimating length, area, weight and time.
6. They interpret symbols on the basis of the visual features of these symbols.
7. They make errors in the time sequencing of picture series.

These problems are widespread but not unsurmountable or unchangeable. They can easily be minimized through frequent exposure to visual materials, literacy training, formal education etc. Interpretation of pictures is a skill which can be mastered, just like learning to read and write. The lesson perception research has taught us is that interpreting pictures and drawings indeed must be learned, while Westerners tend to believe that these visual materials are so close to reality that everybody will recognize immediately what is depicted.

A literal view

People who have never seen a picture or book before, and therefore have no idea what it is, at first, will treat it as an object and guess at its function. Olaudah Equiano, born in 1745 in a village East of the Niger River and captured by slave-traders at the age of ten, gives a very humorous account of his initial perceptions of books in *The interesting narrative of the life of Olaudah Equiano or Gustavus Vassa the African*, published in London in 1789.

> "I had often seen my master and Dick employed in reading, and I had a great curiosity to talk to the books as I thought they did, and so to learn how all things had a beginning: for that purpose I have often taken up a book and have talked to it and then put my ears to it, when alone, in hopes it would answer me; and I have been very much concerned when I found it remained silent" (Edwards 1967:40).

A similar experience is described by Muldrow, who depicts what happened when she presented members of a remote Ethiopian tribe, the Me'en, with a page from a children's colouring book. To her surprise they would smell it, examine its texture, listen to it while flexing it, even attempt to taste it, but they would entirely ignore the picture (cf. Deregowski 1973:4). Imagine, for the sake of experiencing an even greater culture shock, that Muldrow, instead of presenting them with that particular page, had shown them an original drawing by Rembrandt or Raphaël (a drawing by Raphaël representing Saint Paul was auctioned in London in July 1985, and changed owners for about 2 million US dollars). I am sure art loving Westerners would faint at the thought of the Me'en 'examining its texture, listening to it while flexing it, even attempting to taste it...'.

The important point is, why should the Me'en suspect that the scribbles on the paper represent something valuable, or that the scribbles represent an idea or refer to something in reality? To them the tangible reality consists of three dimensions, has colours, is continuous in time, and fairly unrestricted in outlook. A black and white picture or drawing, on the other hand, has quite opposite characteristics: it is two-dimensional, has only two colours, depicts one moment in time, consists of a rectangular cut out of reality, and shows objects in sizes which are not to be found in real life. To the Me'en, and their illiterate colleagues, the two-dimensional world of the picture does not exist (yet).

Many rural people in Swaziland were puzzled and even frightened by the two dimensions and the rectangular shape of the pictures. Often they turned the picture around, looking for the third dimension and the 'rest of reality', i.e. what had fallen outside the frame. In those cases where careless framing had cut off limbs of people, they were genuinely frightened. Imagine: a woman without feet, or a man without a left arm! This is a nasty sight in real life, and so it is in pictures, even though it is caused by the fact that a person did not completely fit the size of the frame.

Careless framing
Photo: Ad Boeren

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Although strange and amusing at first, these reactions make perfect sense if one is prepared to try to 'put oneself into their shoes', 'look through their eyes' and to acknowledge the fact that we take a lot for granted. We often consider things 'normal' and 'self-evident', things which in fact we once learned. Unconsciously perhaps, but learned nevertheless.

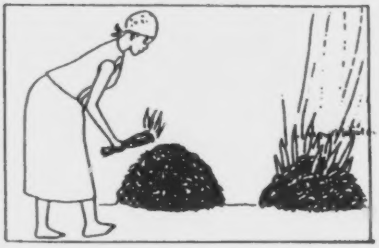
Focus on details

Pictorially inexperienced people tend to focus on details, or parts of a picture, rather than wholes. If asked to describe what they see in the picture, people will point finger at details which they recognize, and name these. People who have never learned to read and write, 'read' pictures more frequently in clockwise or anti-clockwise direction than from the top left-hand corner to the bottom right-hand corner (or in zigzag fashion as they know it from ploughing).

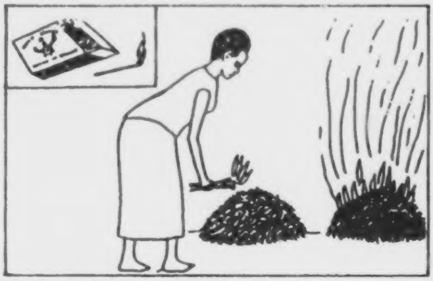
Recognizing and naming details is different from understanding the 'message' of the picture. Many people fail to relate the individual components of a picture to a meaningful whole, especially when things are depicted that are not directly related to their own familiar living environment. Beginning viewers are not adept at distinguishing the important from the unimportant, and they will read meaning into all parts of the illustrations. In this way a tree planted near a house can easily be called a flower, and spots on a wall are referred to as lakes.

Even more problematic are visual materials that consist of a set of objects which have an implied relationship. Take for example a chart divided into two parts. On the left, one sees a feeding-bottle filled with a white liquid, on the right a malnourished baby obviously crying. To experienced readers this chart implies a causal relationship between the bottle and the baby, and they immediately suspect that the baby looks so ill because of something that has to do with the bottle. To inexperienced readers these are simply two unrelated objects. The causal relationship has to be explained to them.

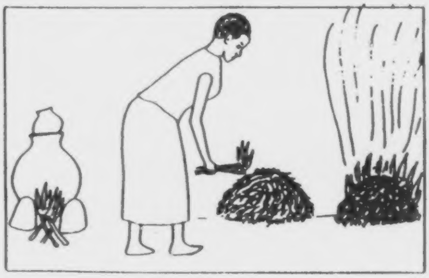
The three drawings below are illustrative of the trials which designers of materials have to go through in order to make an idea understandable to an audience. The drawings were made and tested in Rwanda, and meant to show a woman burning a pile of grass. Pre-tests showed that the fire was not recognized. Most of those questioned said that the woman was picking flowers. In the second version of the drawing a box of matches was added, on the assumption that this might lead to a correct interpretation. But those questioned recognized the 'box of matches' and 'the woman picking flowers'. The connection between the two details was not made. By adding a pot and three stones - the traditional way of preparing food - the burning grass was correctly interpreted by 80 per cent of the interviewees. The visualization of the 'known' cooking fire helped people recognize the fire held by the woman (Gürgen 1987:16).



First drawing



Second attempt



Third attempt
From: Gürgen, 1987

Motion

Pictures and drawings represent 'frozen' images of reality, depicting a situation at one particular moment in time. Certain objects, which are immobile, will look the same at any particular moment, as mountains, houses, trees and roads do. Moving objects like athletes, flying birds and running streams have continuously changing appearances. Once they are frozen in a picture, they are caught in one particular pose. We never see these still postures in real life, only in pictures.

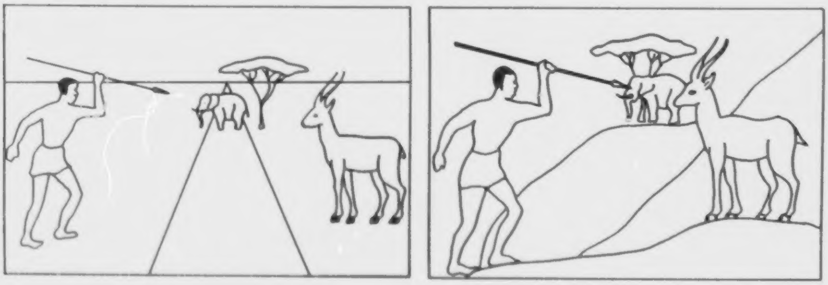
Pictorially inexperienced people interpret these frozen motions for what they are : a man with only one leg or, an arrow hanging still in the air. Running water or streams are particularly problematic. In 'frozen' condition they are just 'streaks of paint', 'snakes', or 'white lines in the grass'. A sensible solution to this problem would be to place some people or animals in or near the stream which will help people to accept the 'streak of paint' as a river: e.g. a man in a boat with a fishing rod, a cow drinking at the stream, a woman doing the laundry.

Pictorial conventions

Perspective and relative size

Pictures and drawings reduce three-dimensional reality to the two dimensions of a piece of paper. As a consequence, depth as observed in the real world has to be suggested on paper. To create the illusion of depth, objects are depicted in different sizes: those in the foreground are drawn larger than those farther away in the background. But in this way the objects no longer correspond with the experience of people. How can one and the same animal appear as a giant (foreground) as well as a midget (background) in one and the same picture? Or, how come that people are bigger than their houses, and that trees look like cauliflowers in comparison to the people?

A classic drawing which illustrates the illusion of depth is shown below and was developed by Hudson. It is one of a series used to test pictorial perception among children and adults in South Africa (Duncan 1973). In the study, the viewers were asked simple questions such as: 'Which animal is nearer to the hunter?' or, 'Which animal is the hunter trying to kill?'. If the pictorial depth is not perceived, then one would expect the subject to answer 'elephant' to both questions. To him the small size of the elephant would not indicate distance. He would probably be puzzled by the extremely small size of this 'baby' elephant. The tests showed that far more black school children did not perceive any depth in the picture than their white counterparts.



From: Duncan, 1973

When three dimensions are squeezed into two, objects often overlap. Experienced people perceive an object that partly covers another as being in front of the overlapped object. Inexperienced people may not see the objects as belonging to different planes, and the overlapped background figure may not be perceived as complete. Or, in the case of a tree standing behind a hut, people may think that the tree is growing on top of the roof.

The convention of using perspective to create the illusion of depth in drawing was developed during the Renaissance in Italy, and is based on the linear geometrical notion that two parallels run together at the horizon. This formula also dictates the relative sizes of objects in order to suggest depth. Probably the most-quoted example of how people may misinterpret these perspective formulas comes from agricultural extension practice. An extension officer in a developing country once held a talk to teach farmers the importance of ploughing in straight lines at equal distances. To illustrate this, he made a drawing on the blackboard. Making use of perspective formulas, he drew a field in which the furrows started at equal intervals at the bottom and came together in one point at the top. The farmers, after having acknowledged that everything was perfectly clear to them, were sent home with a farewell of encouraging words. A few weeks later the extension officer went round to see the farmers and to check whether they had followed his advice. Quite a number of them had, but when he saw their fields he was stunned. The furrows were made in a triangular pattern, starting at regular intervals at one end of the field and converging in one point at the other end. They had copied the drawing on the blackboard, and they had done it in an exemplary way (Zimmer, 1978).

Focusing the attention

Some conventions are used to draw attention to specific details. One of them is 'cropping', i.e. the picture only shows what is considered to be essential for understanding the message, the rest is omitted or left out. This means that all superfluous and distracting items in a picture are removed and/or that the picture concentrates on the subject that matters. If a picture is meant to show how a thread is pulled through a needle, then a close-up of the hands is a way to capture this. Those unfamiliar with this convention may not be able to recognize the detail because it is not shown as part of the whole to which it belongs. If they recognize the close-up of the fingers and the needle they may react frightened, as was already discussed above, because they may take the close-up as 'visual amputation'.

Close-ups can also be used to magnify objects. By enlarging the object it becomes better visible, e.g. in the case of flies and other insects. The problem may arise that the enlarged object is not identified because it is out of proportion to what the viewer knows or has experienced. The sight of a fly having the size of a fist may scare people, but not worry them. In their surroundings there are no such monstrous flies, so, the message is of no relevance to them.

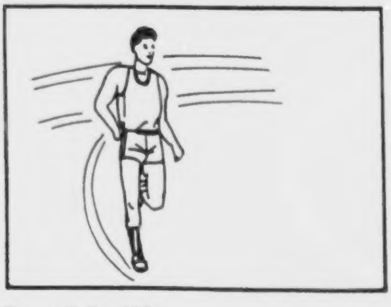
Although many studies have indicated that using appropriate and realistic size is important in drawing pictures to communicate with pre-literate people, this sometimes is in conflict with conventions in traditional or local art. Many local artists who have not had a Western training tend to make the item of interest in an illustration larger than the other items. Cook (1979:24) quotes the example of a local artist in the Siane area of Papua New Guinea who was drawing an illustration to go with a folk tale about a flute. He was picturing the flute on the porch of a local house. But, since the story was about the flute, he made the flute almost as large as the porch. Which serves to prove that each culture has its own conventions to represent reality.

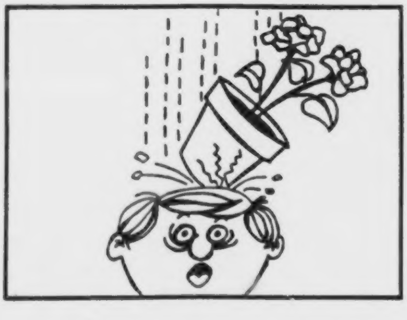
Attention can also be drawn by the use of specific colours. In black and white drawings, certain details may be given a striking colour to make them 'stick out', for example a red fire or orange carrot. As we have discussed in previous chapters, colour associations are not universal, and some colours may have meanings in a particular culture which are inconsistent or at odds with the intended message.

Arrows are also often used to point out a specific detail or part of a picture, but those who are unfamiliar with this practice perceive the shape literally as an arrow and they may wonder what this missile is doing in a bowl of rice, or in a bunch of carrots.

Illusion of motion

Depicting the stance of a runner in full stride often results in odd physical postures which may easily leave the viewers puzzled, rather than able to infer a sense of motion from the picture. In comic strips, motion is often implied by use of lines, a blur, arrows, or multiple images. Inexperienced people try to interpret these devices as belonging to the visible world of the subjects or objects in the picture, and they may decide that the runner obviously has a tail, or that a stone falling from above is hanging on a rope.



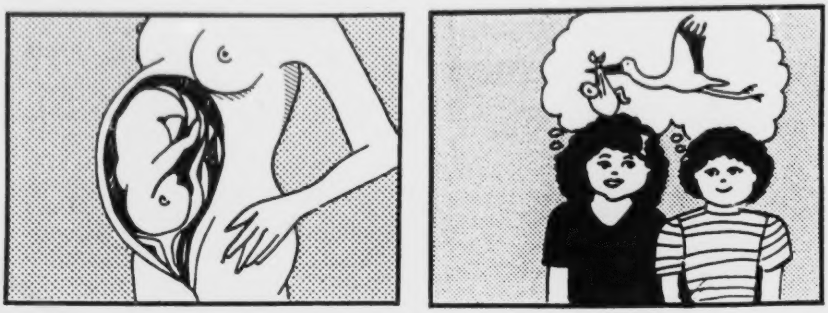


From: Colle, 1986

Inexperienced people certainly need a helping hand when it comes to understanding implied motion in a picture. If motion is an essential part of the message, and if money and facilities are at hand, the use of other media, like film and video, is very much recommended. Film and video can record and project movement in a way that is easily recognized and understood without one having to resort to trivial conventions.

The 'unseen'

With the use of infra-red cameras and x-rays things can be photographed which normally cannot be observed with the naked eye. Straightforward photography can only show what can be seen from the 'outside'. Drawings originate in the human mind, where many images of reality are stored, and the artist can compose pictures which represent imaginary realities or depict the 'unseen'. To uncover or illustrate the unseen, the artist uses various conventions. To show the internal workings of a human being, the artist may for example 'remove' all parts of the body which block a clear view of a particular part or organ. This is quite common for medical drawings, such as the one below, which shows a foetus positioned in the womb of the mother. These types of pictures are not liked very much by inexperienced viewers. To them, the poor woman looks butchered by cruel savages. An effective, but more laborious alternative is the use of a flip chart consisting of several drawings showing the same woman but in various stages of being 'opened up'. In the first picture the woman is shown in full shape, in the following drawings, 'layers' of the body are peeled off until we reach the womb. Thus the viewers are prepared for the drawing which shows the foetus in an instructive way. An even more expensive option is the use of a three-dimensional model of the human body which can be taken apart.



From: Colle, 1986

To visualize what people think or say, the artist may add text or thought balloons. Thought balloons often contain pictorial representations of what is on a person's mind but is not said, and the balloon is connected to the person through a string of small bubbles. If the thought is somehow dreamy the balloon will have the shape of a cloud (e.g. a bicycle in a cloud above a little boy means that the boy is dreaming about the bicycle he would like to have). Text balloons contain whatever is said by a person and show written language, except in those cases where a person curses, then visual symbols are used. Text balloons have little 'trunks' or 'tails' which connect them to the speaker.

Another example of visualizing the 'unseen' is the geographical map. Maps of an area or town are drawn from an aerial view; like a bird sees the world beneath. Few people ever have the chance to look at the world from that perspective, hence, ordinary people need a lot of imagination when looking at a map. Reading a map is using your imagination as if you were flying. Without this skill, a map is just a configuration of lines, dots and colours which hardly makes sense.

Drawing styles and picture quality

In visual materials, extensive use is made of photographs and drawings, coloured as well as black and white ones. Photographs have more detail, seem to be more 'real', and are easier to produce. If detail is disturbing, it can be erased from the print and a 'blocked out' scene remains. A major problem in photography in the tropics is trying to avoid high contrasts. Photographing people with dark skins in a sunny environment is problematic. In drawings, things can be better controlled: composition, framing, perspective, amount of detail, colours and contrast. In comparison with photographs, drawings may look less 'realistic' and they take more time to produce. Drawings can range from simple stick figures to drawings that almost look like photographs. On the next pages, a number of drawing styles illustrate the variation.

Comparative tests carried out in various parts of the world seem to suggest that realism in pictures works best with pre-literate people. Stick figures, silhouettes and stylized line drawings are least effective. Photographs with complex backgrounds score better but are not as effective as block cuts (photographs without background) and realistic drawings with little detail (Ramm 1986:138).

In order to create the illusion of depth and volume in the drawings, a number of shading techniques can be used. Firstly: dots in varying concentrations. These dots are used to suggest the volume of a person, but have the disadvantage that they may be 'misinterpreted ' as measles. Secondly: hatching by marking close parallel and crossing lines. This technique, applied to drawings of people, can lead to puzzlement. Viewers may believe that the people suffer from excessive hair growth on their arms, legs, faces etc.. The third technique consists of fading colours, i.e. varying in darker and lighter shades, similar to what can be observed in photographs. This technique usually works well with less experienced audiences: the results look quite 'natural' and 'realistic'.

7.- Trate de no matar abejas

¡VIENE CON EL DOCTOR JUEZ!
¡AQUI NADIE ES CRIMINAL JOVEN GUARDIA!
¿DONDE ESTÁN LOS CRIMINALES?

Sources:

Orbit. The magazine for young Zambians, Ministry of Education Zambia.

Apicultura. Programa de educación postescolar a distancia, Ministerio de Educación y Cultura, Uruguay

Buchisapillo. Casos y cosas de la selva, no.4, CETA, Peru.

Cook, Bruce L., Effective use of pictures in literacy education: a literature review. In: *Literacy review*, no.2, 1980, p.1-55.

Kutefmwala ngenjabulo. A happy pregnancy, PBFL/Swaziland, 1982.

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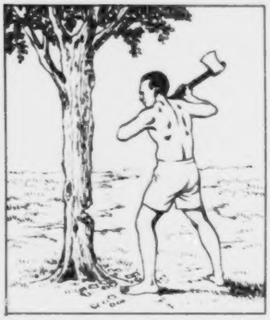

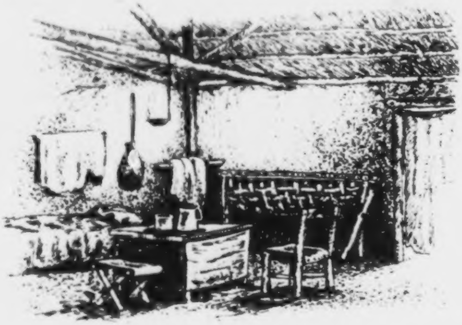

Colour and contrast

Experience shows that people easily adapt to 'reading' black and white pictures and drawings, provided contours are clear and objects 'stick out' from the background. The lack of colour may form a handicap in the interpretation of detailed and complicated pictures. If pictures lack enough contrast the constituting parts will only vary slightly in grey tone. This makes the recognition of separate entities extra difficult.

For certain objects the use of colour is essential, otherwise they will not be recognized. This is particularly true for plants, crops and landscapes. An important requirement, however, is that colours should correspond with those in reality. This I experienced when I showed a colour photograph to a group of rural people in Africa. The photograph showed a row of houses, in which they themselves lived, situated against a mountainous background. I had taken the shot during my previous visit. In the picture the colour of the grass on the mountain slopes was rather yellowish - due to the processing of the photograph - and certainly not as green as in reality. To my surprise none of the inhabitants recognized their own place. Instead, they expressed their happiness about not having to live in that area, because the environment looked so dry!

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A similar experience is quoted by Maspero (1978) and stems from Bangladesh. A coloured poster representing a well-fed, smiling farmer came from the printers looking slightly yellowish. Despite his posture and expression of health and happiness, the general opinion of the viewers was that the man looked sickly. The yellow appearance of the poster had given this impression.

Other sources (a.o. Zimmer, 1978) also confirm that colours have an important, often leading role in the interpretation of visual representations. It is a universal phenomenon that bright and clear colours are associated with happiness and health, while dark and sombre colours relate to death, disease, sorrow etc. This knowledge can be used to express or support ideas which otherwise would be difficult to visualize, for example the idea of unhealthy life-styles. I remember one chart produced in Swaziland which depicted a very pregnant woman breast-feeding her last born. Her facial expression was sad. The chart was intended to drive home the message that having babies at short intervals is unhealthy. Very surprisingly, nobody in the test audience picked up this message. On the contrary, everybody thought the woman to be healthy and happy. After much puzzlement it was discovered that the colourful traditional outfit of the lady had done the trick. The drawing was redone, using the same baby and the same sad-looking woman, but this time dressed in a more western outfit with rather depressing colours: brown and deep purple. With no exception people now commented that the woman was sad and looked unhealthy.

In photographs, sharp contrasts can be misleading. Above, mention was made of the difficulties involved in photographing people with dark skins in sunny conditions. Highlights which appear on the forehead, nose, cheeks etc. are difficult to avoid. In black and white photographs these highlights show as grey or white spots which can easily be mistaken for symptoms of a skin disease. One of the pictures I happened to test was a black and white close-up of a girl standing in the sun. Because of the strong light, her top hair was markedly lighter than the rest. People reacted very surprised; they found the girl rather silly because she apparently had forgotten to rinse the shampoo from her hair!

Sequencing

Pre-literate people have no experience in 'reading' a series of pictures in a particular order, nor do they suspect a relationship to exist between the pictures. Unless told to read pages in a comic book from top to bottom and from left to right, they will look at pictures at random or in circles. Some argue that a different ordering system would be more logical to pre-literates. An example is the zigzag order, which goes back and forth across the page, as the ox ploughs the field.

One ingenious method to teach picture sequence was used in the *Wordless Gospel* for Papua New Guinea, but it is no longer in use (Cook 1979:26). The *method is to draw one stone under the first picture, two under the second,* three under the third, etc., until the end.

People have to learn that picture sequences tell a story and that they depict scenes of the story in a chronological order. Test persons in New Guinea did not perceive that a man depicted in a series of four drawings was one and the same man. Instead, they saw four different people who were carrying out different activities at the same time (Ramm 1986:143).

Symbols and abstractions

Because of their arbitrary meaning, visual symbols like letters, traffic signs, flags etc. should be avoided as much as possible. Visual-illiterates will take these signs at face value, i.e. give meaning to their visual qualities. Frequently used symbols are arrows, arithmetic signs (+, -, =), the 'v' sign for good, and the 'x' for bad. The X is often used for condemning a bad practice. An anti-smoking poster may depict a person smoking a cigarette which is partly covered by a fat red cross. To a pre-literate this may just be a messy drawing in which streaks of red paint partly obscure the scene.

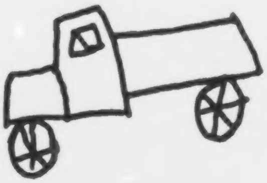
All over the world, health educators make use of the pie-chart to explain the composition of a balanced meal. A circle is divided into three segments and in these segments samples of foodstuffs are depicted. The segments stand for foods rich in proteins, carbo-hydrates and minerals respectively. Without proper explanation, these charts are quite incomprehensible to inexperienced viewers. The circle is commonly perceived as a pie cut up in three parts. Furthermore, the impression is easily created that all foods depicted should be combined to get one balanced meal, instead of just one item from each of the three segments.

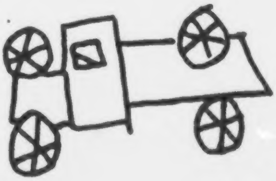
Sometimes a person or object is simplified and drawn according to basic shapes arranged to represent the 'real thing'. But the question is, what are basic shapes, and are 'basic' shapes universally understood? Probably not. Inhabitants of the rural areas of Kenya interpreted a stylized drawing of a tortoise as an elephant because they concentrated on the legs. Other test persons who paid more attention to the head of the tortoise, perceived it to be a snake. Others yet again associated the pattern of the tortoise's shell with a crocodile (Deregowski 1980). This does not imply that pre-literates cannot recognize the 'real thing' from stylized or abstract drawings. They can, if the basic shapes of the drawing correspond with what they consider to be the recognition cues of the object. A striking example of this was the reaction of Swazi farmers to the cover of a veterinary booklet. On this cover, a black silhouette of a bull was depicted, based on a photograph of a well-known prize animal. Without exception, farmers immediately could tell the name and the owner of the bull. Of course, cattle owners are visually trained so that they easily recognize each and every animal in their herd, so there must have been something in the silhouette of the animal that served as a strong recognition cue.

Knowledge

The example of the prize bull clearly indicates that inexperienced people can recognize objects and people in pictures, provided they are familiar with them, and provided they are depicted in a way which corresponds with how people see these objects and persons. For example, in Swaziland, as in many cultures, body size is an important indicator of health and prosperity. After puberty, most Swazi women develop impressive proportions which makes them the more attractive to Swazi men. The ideal baby has the same rotund dimensions. Unfortunately, not all babies with big bellies are healthy. Malnutrition can lead to a similar girth. It proved difficult to convince traditional Swazis with little or no schooling of the fact that fat babies may be in bad shape. When confronted with pictures of malnourished babies with big tummies, people thought the babies looked rather healthy.

People may also have different expectations with regard to the representation of reality, or even different codes of presentation. Many cultures have pictorial traditions that present objects as they know them instead of how they are seen from a certain angle. Most drawings made by children are based on the same principle. In this tradition, a drawing of a car always has four wheels even though the vehicle is seen from the side. By the same token, a drawing of a person, regardless of the viewing angle, should have two eyes, two ears, two arms and two legs. Presenting the world 'as it is known' is very common, and to many people it seems to be a more 'obvious' choice than presenting the world according to western pictorial codes. It apparently makes more sense to them.





From: Fuglesang, 1982

Conventions in film

Film is composed of 'moving' pictures supported by sound, and most observations regarding codes and conventions in still pictures are also applicable to film. One code, however, is not applicable. Still pictures give an unfamiliar 'frozen' representation of reality, while in film actions and movements are shown at length. This option gives film a definite advantage over still pictures when it comes to the representation of reality. But, as with still pictures, film presents a two-dimensional world with all pictorial conventions in place.

In addition, film applies an elaborate set of other conventions which the audience needs to master for a full understanding of its content. These conventions have to do with sequence, rhythm, speed and emphasis.

- Every film is composed of a series of consecutive shots. A shot is an uninterrupted recording of a particular action. Shots may be extremely short (e.g. the wink of an eye) or rather long (e.g. somebody making an omelette). If a length of film is made up of many short shots, the viewer is confronted with a rapid succession of different scenes, which gives the impression of haste and tension. Movie makers use this rapid sequence of shots to create suspense, to imply speed or to lead the audience to immanent catharsis or disaster. A series of long shots has a relaxing effect and is often used in pastoral and romantic scenes.

- Shots in a film relate to each other as a series of drawings in a comic book. Unlike the comic book, the film gives the viewer no other option but to look at the shots in a pre-arranged order. Although the shots are viewed one after the other, the story which they present is not always told in a chronological order. Some scenes may take place at the same time and the shots of these scenes are 'sandwiched' to indicate to the viewers their simultaneity. Many films also make use of 'flashbacks', e.g. a person in the film is thinking of an event in the past and this event is then shown in the following shot(s).

- Films can be recorded at variable speeds. Projectors run at 24 frames per second and when a film is recorded at the same speed, movement or action will look realistic. Actions recorded at a slower speed (e.g. 16 frames per second) but projected at 24 frames p/s will appear to be faster (the effect of Charlie Chaplin films) and actions recorded at 36 frames will appear to be slower (slow motion). Following the same principles, special effects can be generated. On film, a flower can open in less than 10 seconds and clouds can be seen rushing along the sky.

- Film shots, like still pictures, are taken at a certain distance from the object or action. Shots taken from a great distance show the setting in which an action takes place, while shots taken at a short distance (either by moving the camera closer or by using telephoto-lenses) show actions or persons in detail. An overall shot followed by shots that come increasingly closer to the object focuses the attention of the viewers and increases their involvement. When arranged in the opposite order, from close-up to overall shot, the impression is created that we take leave of the person or situation. These devices are used by movie makers to emphasize certain scenes or interactions in the story. Scenes which are emotionally loaded or which are meant to convey suspense are mostly shot in close-up. The viewer is 'literally' dragged into the situation. Because of this, film appeals more to the innate curiosity of the viewer than to his ideas about decent behaviour. Let us face it, close-ups bring the viewer embarrassingly close to often very intimate interactions between people. In everyday life, people would feel obliged to keep a certain distance when people quarrel, make love, or exchange confidentialities. With film, the viewer sits front row, an invisible witness to these intimacies. This probably is one of the great attractions of the medium. Film allows people to be Peeping Toms of other people's life.

- Other devices which movie makers use are fade-out, fade-in and dissolve. In a fade-out the end of a shot turns black, while in a fade-in the opposite happens: a black image gradually changes into a realistic picture. Fade-out and fade-in are usually applied in combination and in old movies they were often used to mark a change of scenes and a lapse of time. In more recent films they are no longer fashionable. Nowadays, a change of scenes is presented the hard way: a new scene immediately follows the previous one. Audiences are expected to be so well-trained that they no longer need fade-ins and fade-outs to recognize a change of scenes or lapse in time.

In a dissolve, the end of one shot smoothly changes into the beginning of the next. This device is used for various purposes; it may mark the beginning and end of a dream, the beginning of a new scene or lapse of time; the romantic or dreamlike atmosphere of a scene may be enhanced by one's smoothly dissolving the shots; or the device may be used to bridge harsh contrasts between consecutive shots.

All these devices to bridge time, to create involvement, or to focus attention are conventions which viewers around the globe have learned to interpret by going to the cinema or watching television regularly.

Very little research has been done on the perception of films by inexperienced viewers. There are a number of anecdotes recorded by people working for Colonial Film Units in Africa, but that is about all (Giltrow 1978). These anecdotes indicate that inexperienced audiences look at all details on the screen, they do not distinguish between foreground and background, they have problems in identifying and constantly 'tracking' the main action as opposed to the peripheral activity, and they take things literally.

It is not far-fetched to assume that inexperienced viewers who have problems in interpreting drawings and pictures will face the same, and maybe even more problems in interpreting films. The fact that few research findings are available and the fact that films look more 'realistic' than still pictures may lead one to suggest that films pose fewer problems in interpretation. I would argue that the opposite may well be true, considering the simple fact that, in film, many more conventions in visualization and narration are used than in still pictures; more conventions mean more possibilities of misinterpretation.

Unless people have learned these codes, they will fail to follow the main action or argument. In the case of feature films this may not matter much because their primary function is entertainment. In the case of educational and extension films it is essential. Educational films aimed at inexperienced audiences should, therefore, avoid effects and unnecessary conventions as much as possible. The shots should be longer and sudden changes from overall shots to close-ups should be avoided. To experienced viewers these films would be rather slow, simple and boring, like a children's book is to an adult. But let us not forget that the earliest films are considered slow, simple and boring by present day audiences for the same reasons. The 'language' of the medium has increasingly gained in complexity as people's viewing skills developed further. Inexperienced viewers have to master the film language starting at a more rudimentary level, but with regular exposure to films and television they will catch up in no time.

Better results

The preceding paragraphs illustrate some of the problems involved in the development and use of visual materials to communicate with audiences that have little experience with the interpretation of pictures or drawings. They also illustrate the difficulties communicators have when conveying a message to a culturally different population. In these situations, the communicator is likely to have a less than adequate understanding of the population's familiarity with a particular medium and of traditional ways of depicting messages in pictures. This may annul a communicator's creative inspiration (Colle 1986:162).

The most effective way of tracing sources of misunderstanding and rejection in materials is by extensively pre-testing the prototypes. Pre-testing is a crucial stage in the development of (visual) materials. Every drawing, film or other visual material needs to be thoroughly tested with a representative sample of the intended target audience, before the material is multiplied. This point should also be taken to heart by local artists or programme producers. They often unjustly assume that they know exactly how their relatives in the rural areas live, think and perceive things. They are simply not aware of the fact that living in town, western education, and exposure to various media have 'alienated' them from their relatives in the country side. They belong to a different 'culture' with different perceptual characteristics.

Scientists and developers of materials who have been involved in pre-tests and perception studies will agree that these exercises are most fascinating, confronting and instructive. There is probably no other research instrument which reveals the influence of culture on communication so directly, so effectively and in such a simple manner. What is more, it is applied research in the true sense of the word. The data resulting from these studies are directly applicable and can be used to develop materials which are clear, understandable and interesting to audiences in developing countries. At the same time, I agree with McBean (1987:12) who complains that the publications on these studies have had a greater impact in the academic world, contributing to the debate on the psychological study of cross-cultural perception, than in circles of material producers and visual artists.

Producing visual materials for pictorially inexperienced people is an interesting challenge. Colle (1986:162) concludes his article with the following phrase " Making visuals may be an art, but applying them meaningfully and wisely requires a generous amount of social science". Although the importance of social science in the understanding of developmental and communication issues cannot be disputed, in my opinion not every visual communicator needs to have a background in social science to be able to develop effective materials. It is more important that he has a social curiosity, a flexible and questioning mind, and the imagination and will to put himself in someone else's place.

Part III

Media for development

7.

The media and their educational potential

In discussions on communication for development, (mass) media have tended to occupy a central position. This trend was set by the scholars who formulated the modernization strategies which implied the use of modern mass media. Under the influence of the participatory school of thought, the insight grew that development communication could and should be more than trying to create 'favourable climates' and rendering technical support to programmes. In fact, development communication was seen in a much broader social and educational perspective and came to be understood as a social process which was primarily aimed at seeking a common understanding or consensus among all the participants of a development initiative. In this scenario, the focus of communication for development shifted from the media to more interpersonal communication approaches. Participatory development commanded dialogue between people, a condition which most media could not fulfil.

There is little doubt that communication and the use of media have been, and still are strongly related to ideologies, politics and interests. In the 'modernization' model, donor agencies and national governments counted on the mass media to catapult the rural areas into the 20th century. In the 'participation' model, the stronghold of grassroots-level organizations, the use of participatory and indigenous media like drama, local radio, and video was propagated. The available literature on the use of media for (rural) development reflects these trends. There is substantial literature on the use of mass media, in which an attempt is made to establish the cost-effectiveness of media-supported interventions, and a vast stock of mostly descriptive reports on the use of participatory media for rural development. Interestingly enough, there is much less material on the use of the smaller media of printed materials, flip charts, filmstrips, models etc. The reason is not that they are not being used. A likely explanation is that these media do not appeal to development thinkers and policy-makers. They are neither 'modern' nor 'participatory' and as such not suitable for the support of the fashionable development ideologies. These smaller media can truly be called the stepchildren of development communication. They receive little attention although they are quite appropriate for rural areas in development countries.

In this chapter, the various media will be compared based on two aspects: the level of conventionality and the educational potential of each medium. Before that, a classification is presented which distinguishes the various media according to a number of characteristics and functions. The advantages and disadvantages of the media in rural development programmes are discussed in the next chapter.

Classifying the media

In everyday speech the term media is associated with a group of communication devices which spread information to large audiences, the so-called mass media, i.e. television, radio, newspapers, film and magazines. This is a rather narrow definition of the term, since it does not specifically include the media which mankind, from its earliest days, has developed to communicate with: i.e. verbal language, body language, dance, music, decorations, ornaments, drawings etc. We will use the term media in its broadest and more fundamental sense, meaning all sorts of carriers people use to exchange ideas.

For the sake of clarity, it may be useful to differentiate between the media and to classify them according to their characteristics.

1. *Media generated by the human body*

This category contains all media in which the body is used as an instrument of communication. They are verbal language, facial expressions, postures and other forms of body language (including sign language), tattoos and other body decorations. Apart from tattoos, these media are transient, which means that they only carry meaning at the moment of expression. Unless recorded, they will only be stored in the memory of those present at the communication event. Hence, in essence, they are interpersonal communication media.

2. *Objects or substances used in transient communication*

This category contains all sorts of substances and objects/instruments man uses in transient communication. They include instrumental music, smoke signals, flag signals, signals by Morse code, horn signals, incense, perfume etc. Media that appeal to the smell of people and music are interpersonal media. Coded media such as smoke, flag and morse signals are derived from verbal language and enable one to communicate over long distances.

3. *Objects or substances used to deposit and express ideas*

This category includes all sorts of visual signs used to make people aware of something (including traffic signs), architecture, ornaments, drawings, texts, paintings, photographs etc. These media can convey ideas beyond the context of interpersonal communication. Since ideas are deposited in substance, they can be interpreted at a distance, in time as well as in space. A dollar note represents an economic value recognized around the world. At the same time, it refers to the United States as the land of origin. The Eiffel Tower was built for the occasion of a World Exhibit as an expression of modern construction ingenuity. Since then, it has become one of the symbols of Paris.

4. *Complex media*

Complex media combine media belonging to two or more of the above mentioned categories. Striking examples of complex media are rituals and the performing arts, like dance, songs, puppet shows, theatre and opera. They combine verbal language (except in dance), body language, music, sets, artifacts, clothing, decorations and the like. Although they make use of more permanent media, the complex media are transient. Their communicative value is momentary, i.e. at the moment of performance

5. *Mass media*

To this category belong all media that enable one to disseminate ideas to large audiences through technological/electronic means. They consist of all printed media (books, newspapers, magazines, posters, leaflets, wall charts, flip charts etc.), recordings, radio, television, film, filmstrips, slide-tape programmes, cassette and video programmes. Of these media, television and radio are transient. They communicate at the moment of broadcasting. The other mass media are deposits of ideas and communicate their message every time the medium is consulted/looked at by an audience.

Most of the mass media have little communicative value of their own. They are information-carrying technologies and they serve mainly as vehicles for other, more traditional, media. Printed media serve as vehicles for written language, drawings and pictures. Radio for verbal language, music, song and drama. Film and video programmes, on the other hand, may have a distinct communicative value because these media can visualize or suggest ideas which cannot be accomplished by more traditional media. Television can be regarded as a versatile and many-sided vehicle for all sorts of media, traditional as well as modern. Television carries verbal and body language, objects and pictures, film and drama, music, etc..

Although most mass media allow communication without direct interpersonal contact, some of them are designed and can only be used as instructional materials. As such, they need an instructor to communicate the ideas embedded in the media. This is the case in school broadcasting programmes and in many audio-tape, video and filmstrip programmes.

The media and their communication potential have been brought together in the table on the next page. Group A consists of media which are transient and use face-to-face interpersonal communication. Group B are media which consist of substances/objects that represent ideas (in which ideas are deposited) and which are used, or serve as communicators in interpersonal communication. Since they have an aspect of permanence, they can also act as mediators between source and receiver when these are not meeting face-to-face. Group C includes mass that have a more permanent communicative value, while the mass media of Group D are transient in nature. 'Mass' in this context does not simply signify a large audience. This would not be a valid criterion because a number of face-to-face interpersonal media can reach large audiences, e.g. theatre performances, or even a speaker during a mass rally. The essential characteristic of mass media is that they can reach large audiences spread over geographical areas and, in case of the more permanent media, at different points in time.

Table 1. *Media and communication potential*

Media	Interpersonal	Transient	Deposited	Mass
A.				
Verbal language	x	x		
Body language	x	x		
Body decorations (excl. tattoos)	x	x		
Rituals and performing arts (incl. music and dance)	x	x		
Sign languages	x	x		
B.				
Script (non-print)	x		x	
Clothing and jewellery	x		x	
Architecture, artifacts	x		x	
Drawings, pictures	x		x	
C.				
Printed media			x	x
Film and video			x	x
Cassette and filmstrip			x	x
D.				
Radio		x		x
Television		x		x

This table is not meant to be exhaustive, nor are the groups strictly exclusive. It does, for example, not include and other devices. Telephones, telegraphs and telefaxes are information carrying technologies which act as vehicles for verbal and written speech. They are the modern versions of smoke, light and flag signals. Since they hardly have any communicative value of their own, they are not included in the table.

Levels of conventionality in the media

In his book *Understanding media* (1974:31) Marshall McLuhan makes a distinction between 'hot' and 'cool' media. "A hot medium is one that extends one single sense in 'high definition'. High definition is the state of being well filled with data. A photograph is, visually, 'high definition'. A cartoon is 'low definition', simply because little visual information is provided. Telephone is a cool medium, or of low definition, because the ear is given a meagre amount of information. Speech is a cool medium of low definition, because so little is given and so much has to be filled in by the listener. On the other hand, hot media do not leave so much to be filled in or completed by the audience. Hot media are, therefore, low in participation, and cool media are high in participation or completion by the audience. Naturally, therefore, a hot medium, like radio has very different effects on the user from a cool medium like the telephone".

Schramm (1973:127) correctly pointed out that McLuhan has not been entirely consistent in classifying the media. He distinguishes a hot medium like radio from a cool one like the telephone, and a hot medium like the movie from a cool one like television. Referring to what was said in the previous paragraph, it is surprising that McLuhan considers television to be a cool medium and the radio a hot medium. In my view television and radio, like the telephone, act as vehicles for other media. What communicates is not so much the medium television, radio, or telephone itself but the messages which are conveyed. The information density of the mass media is defined by the information density of the messages they transmit.

What makes McLuhan's classification interesting is that he tries to distinguish the media according to the level of 'participation' of the audience involved. Participation in McLuhan's context refers to the degree of imagination that is required from the audience to understand the message. Photographs are full of explicit data and leave little room for the imagination, as opposed to speech, because little is given and much has to be filled in by the listener. McLuhan's levels of 'participation' correlate to what we have discussed in Chapter 3 on the relationships between signs and what they signify. A distinction was made between more and less arbitrary signs and symbols, indexes and icons were discussed. Verbal language consists of arbitrary, or conventional, signs and people can only communicate through it when they share a common understanding of the signs that are used. Symbols require a lot of 'participation' since people need to understand the meaning of the signs in a given context to be able to exchange ideas. There is less 'participation' in the use of indexes and icons because these signs are less arbitrary, they seem to be similar to what they stand for.

Instead of 'participation', I prefer the use of the term 'convention' to describe the intellectual conditions for communication. All communication that uses a lot of symbols is highly conventional and people have to learn the meaning of the signs to be able to understand it.

When applied to the media, a distinction can be made between high-conventional media, characterized by the use of symbols as the main carriers of information on the one hand, and low-conventional media, characterized by the use of icons as the main carriers of information, on the other. All languages, be it verbal or non-verbal, are highly conventional media, and include speech and its derivatives: script, sign languages, Morse codes, as well as all objects/substances that carry a symbolic meaning. Less conventional are the media that carry meanings which refer to certain contexts or ideas, like clothing, perfumes, architecture, music, dance, ornaments and artifacts. Low-conventional media are those whose messages resemble what is being represented. Good examples of low-conventional media are photographs and drawings. However, there is a caveat as we have seen in the previous chapter: not all drawings and photographs are low in conventionality.

Mass media like radio and television are basically low-conventional media. The main function of these technologies is to transmit to the audience as realistically as possible what is being recorded in the studio and on other locations. In this sense, they are similar to the realistic picture and the sound recording. However, through technological tricks like dubbing, fading, video graphics and the like, the mass media add their own specific conventionalized messages to what is being broadcasted.

In table 2, a number of media have been classified according to their levels of conventionality.

Learning objectives

Communication in most cases is intentional, i.e. carried out with a purpose. The purpose may be to inform, to draw attention, to convince, to instruct, to question, to plead and so on. In an educational context, communication is used explicitly to serve a number of purposes which correspond with the learning objectives of education. Education is used here in a very broad sense and includes all situations in which people learn, with or without a teacher. It includes education at school and out-of-school, extension and training; what people learn from parents, peers and through experience. Through education, people are stimulated to learn the knowledge, skills, values and attitudes which they need in order to be successful in life. And, ideally, education develops curiosity and an eagerness to learn in such a way that people will continue to learn throughout their lives.

Table 2. *Media and conventionality*

	Degree of conventionality		
	High	Medium	Low
Verbal language	x		
Sign languages	x		
Script	x		
Decorations		x	
Artifacts		x	
Music		x	
Clothing, jewellery		x	
Cartoons		x	
Film		x	
Television			x
Radio			x
Photographs			x

Probably the oldest methods of instruction are learning by doing and by memorizing. People learned skills from their parents or neighbours by observing, by copying and by doing. Skills were passed on from generation to generation through face-to-face instruction in everyday life. Knowledge about life, the origin and history of the community, norms and values which were shared by the members, all these and more cultural aspects existing in the minds of people, were conveyed orally, either in the form of stories, myths or legends. Younger generations had to memorize these stories to be able to pass them on to their children and, hence, to convey and conserve culture. The invention of script was a great breakthrough in education. The stock of knowledge of a community could be recorded and retrieved through time, and many pupils could learn from written records once they had learned to read.

In modern education instruction, memorizing and reading are still the major teaching and learning methods. However, new techniques have been developed that make the teaching-learning process more efficient and effective. In all these techniques, media play an important role. They range from the classical blackboard to the modern interactive computer. Media are being used to substitute the teacher, as is the case in distance and correspondence education, or to assist the teacher. In all instances the media are extensions of the teacher, carrying educational messages which in the olden days the teacher would have taught all by himself, and mostly orally.

Educational potential of media

All media have educational potential. They can be used for passing on information, for motivation, for instruction and for entertainment. The advantages of using audiovisual materials in teaching situations are well known. They can be listed as follows:

1. Audiovisual materials increase understanding.
   The retention of visual information is about three times as high as that of oral information. In addition, showing objects is more reliable than trying to describe objects in words.
2. Audiovisual materials save time.
   Visual images can explain at a glance what would take one a long time to express in words. A good photograph or drawing of an object will ensure that both parties are talking about the same thing.
3. Audiovisual materials help the instructor to follow a logical sequence of thought.
   An outline on a blackboard or a story on a flip chart will enable the instructor/trainer to cover the topic step-by-step in a logical order and without omitting parts of the presentation.
4. Audiovisual materials and drama are entertaining.
   People in general love to look at pictures and listen to stories. Rural people are no exception. They love it even more because they are so little exposed to printed and recorded information. The presentation of appealing materials encourages people to come to meetings.
5. Audiovisual materials and drama encourage audience participation.
   Interesting visuals and narrations create greater involvement on the part of the audience and will easily solicit comments and questions for discussion.
6. Audiovisual materials increase the span of attention.
   A good audiovisual presentation can stretch the span of attention of the audience considerably because of its entertaining qualities and a constant opportunity of visual and auditive stimuli and formats (interviews, drama, commentary etc.)
7. Audiovisual materials increase the effectiveness of the educational presentation.
   Because of the characteristics mentioned above, the overall effectiveness of the session will increase. The audience will understand better and faster. They will be entertained and encouraged to give their comments. The instructor/trainer will be able to present his talk logically and to the point.

Students, young and old, learn from any medium or audiovisual material, in- and out-of-school, whether their learning is intended or not, providing that the content of the medium leads them to pay attention. As Schramm says, it is hard to prevent a student from learning from a medium, and the real problem is to get him to learn what he is intended to learn (Schramm 1977:267). However, no single medium is likely to have properties that make it the best medium for all educational purposes. The educational potential of each medium is partly determined by its communication channel, partly by the topic, the format, and the educational objectives to be achieved. A number of examples may illustrate the case.

Communication channel

Sound recordings and radio are auditive media which convey language, natural and man-made sounds, including music. As such they can be used to pass on news, stories, discussions, songs, musical compositions and those instructions that can do without visual support.

Script (including print) conveys text in the form of news items, facts, stories, instructions, poetry and the like. Script in combination with illustrations can be used for detailed instruction, e.g. an instruction manual on how to operate and maintain a piece of equipment. When properly organized and well written, a text can be self-instructional, enabling a student to master knowledge and skills at his own pace. Proof of this is provided by many successful correspondence courses.

Still pictures are excellent media for portraying situations and objects in detail, and for showing constructions and the internal structures of bodies and machines. In one single visual impression they can clarify things that cannot be explained easily by words. When put in sequential order, as in cartoons, filmstrips and flip charts, they can be used to tell stories and to illustrate the sequential steps in a process (e.g. how to build a cowshed).

Films have a quality that cannot be matched by the other media, i.e. they can show movement. As such, they are indispensable media when the aim is to record, show or analyze dance, rituals, theatre performances, non-verbal language, behaviour of people, reactions of people in communication, etc.

Drama, like puppet shows, theatrical plays and role plays, are excellent media for sharing educational stories with large groups. They are entertaining and, unlike any other medium, have the potential of 'dragging' the audience into the story by means of the true-to-life character of the performers and the immediacy of the occasion.

Topic

The topic of communication exerts influence on the choice of the medium. Is the topic abstract or concrete, simple or complex? In language instruction various media are used, such as teacher-student interaction, texts, grammar books, recordings and sometimes television programmes. In essence, teacher-student interaction would suffice, as this is the traditional way of learning another language. The other media are used to make the training more entertaining, effective and efficient. Texts and books help the student to acquire the vocabulary and learn the grammar of a language. Recordings help students to master the right pronunciation, and scenes in television programmes illustrate the context of correct usage.

Topics that deal with mental constructs such as philosophy, psychology, religion, values, sociology, politics and the like are taught verbally, supported by written texts. Other media are used to record, analyze and show expressions of these mental concepts in concrete situations in life, e.g. the recording of a discussion in a business meeting to study group dynamics, power relations and psychological processes.

A topic like family planning is rather abstract because it deals with cultural values about procreation, gender relationships, family economics and the meaning of life. Communicating about this topic is primarily an interpersonal verbal affair. In family planning campaigns the use of media is usually restricted to two areas: a) illustrations of how the number of children may affect the wellbeing of the family and the health of the mother and baby, and b) illustrations of what sort of contraceptives are available and how to use them. The stories that are told by the media about happy families with fewer children are meant to stimulate the audience to reflect on their own situation and to consider critically the core of the problem, i.e. cultural values underlying existing family planning practices.

The use of visual media is most imperative in those topics which are concrete and practical and for which the medium language is not the most efficient. Explaining what the Eiffel Tower looks like, how an engine works, or how a tree must be pruned can be done very effectively with the help of pictures, models and films.

Format and learning objectives

Communication format and learning objectives are usually closely connected. The format may consist of stories, discussions, commentaries, news items, interviews, documentaries and the like. Stories, ranging from fairy tales to novels, from fables to legends, describe events of people or creatures in a certain context. They may have been created for the purpose of entertaining the audience, of educating them or of giving them food for thought. Fables usually combine these three objectives. The fact that human relationships and interactions are situated in the world of animals gives one the freedom to exaggerate behaviour and to indirectly ridicule and criticize certain human characteristics and attitudes in fables. Most media are suited to convey stories. Exceptions are media that are 'singular', i.e. that portray one event, situation or object such as models, posters, charts and still pictures.

If the learning objective is to inform or to instruct people, the information needs to be conveyed in a clear and structured way. Formats that allow this are news items, commentaries, documentaries, lessons and lectures. To interest or motivate people the communication needs to 'tickle' them, to make them reflect on their own ideas and behaviour, and assess the feasibility of alternatives. Usually this happens when people are confronted with different views, different life-styles, appealing alternatives (material as well as immaterial), or when they are made aware of their own situation and functioning, and the consequences thereof. Many advertisements and extension campaigns are based on these principles of 'tickling' the minds of the audience. Formats that 'tickle' the mind are presentations of facts by a credible source, case studies, discussions between people and stories with which people can identify. All these formats are used successfully in advertisement and extension campaigns. Credible sources can either be experts, celebrities, or the 'girl next door'. Household soap used to be advertised by female film stars, exemplary of success, beauty and an impeccable skin. Washing powder is advertised by another set of credible sources. It is either the expert, a male (!) chemical analyst dressed in a white (doctor's) coat, a washing machine salesman giving his professional verdict on the quality of the product, or an 'ordinary' housewife invited to put the product to the test. Although suspicious at first, because she always thought she was already using the best washing product available, the housewife gives in to testing the alternative on the instigation of a male commentator's voice, a smart mother or a successful friend. Invariably she is 'surprised' by the much better results obtained by using the new product. She smiles happily and the audience knows why. When her husband and children face the world with clothes even cleaner than before this will positively reflect on her as a housewife. These formulas are used for advertising all sorts of household appliances and household products. Similarly, they are used in extension to interest people in new types of fertilizer, powder milk, pesticides, cooking stoves etc.

Discussions are a very effective format to help people organize their thoughts about a particular subject. Although the audience does not necessarily join in the discussion, it will usually take sides on the basis of the arguments presented. It is a process of weighing arguments against the backdrop of specific individual situations, attitudes, behaviour and beliefs. This process may spark off a reconsideration of beliefs and attitudes and ultimately lead to a change in behaviour. In extension, discussions are frequently used as a first step in the process of change. Contrary to usual practice, discussions may be kept very short to pinpoint the controversy of the issue at stake. An illustrative example of a short but effective discussion is the following discussion starter, a learning tool used to generate dialogue and discussion among community groups about breast-feeding. A husband and wife are having a quarrel:

Husband Come on, Dear! Our children are so sickly! Could it be that they get only cow's milk or formula every day? Why do you refuse to breast-feed them? They're your children, not some cow's!

Wife Ahhh! Listen to the man! He doesn't know what's happening. I'm busy with the women's association meetings. Besides, if I breast-feed and get all 'saggy', you won't like it at all!

Husband Oh my lord! Just listen to me, will you? You just want to please yourself, going to those silly women's association meetings all the time ... and ignoring your children! You have some responsibilities, and to me the most important is feeding your children properly. Who says you'll get 'saggy' from breast-feeding? I don't care about that anyway, so don't use me as your excuse!

Wife Humph! Now listen to him! You were the one who kept pushing me to join the association so that your wife would become 'modern' and respected in the village. And now you change your tune since you've become an expert on child care and nutrition. What's really bothering you, anyway?

The Technical Note from which this starter is quoted (Yunus 1983) suggests the following questions for discussion among the groups:

1. Which person do you agree with, the husband or wife?
2. What are your reasons?
3. Do women in your village breast-feed, or do they use cow's milk and formula? What are their reasons?
4. What does the word 'modern' mean in your community? How do 'modern' people act? Is breast-feeding 'modern'?
5. How would you solve this argument?

The discussion starter introduces a short piece of social drama, familiar to all audiences, in which a number of priorities clash. The actual topic, that of breast-feeding, is cleverly and realistically linked to issues involved in the husband-wife relationship, work division, health, esteem in the community, physical attraction and progressiveness. No doubt everyone who hears this discussion will recognize the whole, or parts of the argument and will try to clarify his ideas on the matter. This often leads to support for the views of either side. Whatever the result will be, the discussion starter affects the audience, provokes reactions and makes people think.

Stories and case studies which are aimed at creating an interest for a topic often incorporate discussions and are built around people with whom the audience can easily identify (the credible source). The discussions may be either in dialogue form or consist of an 'internal struggle' fought by the main character (e.g. having to choose between obedience to one's parents and the love for the boyfriend). A weak alternative to the discussion is the story in which examples of 'good' and 'bad' behaviour are being compared. For example: family A is more traditional, the mother breast-feeds and the children are healthy; family B is progressive, the mother has an outside job, the children are bottle-fed and, consequently, not healthy. The expectation of telling this two-sided story is that the audience will have or develop a preference for the family with the healthy children, including the conditions which allow this, e.g. traditional life-style and breast-feeding. Real life is rarely as clear-cut as the opposing examples suggest, and one must take great care not to exaggerate the differences between 'right' and 'wrong' examples because otherwise the audience will not be able to identify with either side.

'Good' and 'bad' examples can also feature independently, as is often the case in advertisements and posters. These media do not give one space for telling long and complicated stories and, hence, there is no room for elaborating on the pro's and con's of the subject. Posters on breast-feeding either show a healthy baby suckling the breast of the mother, or a crying, malnourished baby in the company of a feeding-bottle. The advertisement of the woman discovering the 'magic' of a new washing powder is also an example of a 'good' story. So are all those advertisements that 'promise' luxurious lives, beautiful women and lots of success when you start smoking the right cigarettes, and using the rights perfumes, toothpaste and underwear.

Media that are most suitable to assist in motivating or interesting people are those which allow one to tell stories, to present facts and to report discussions. Most media have these abilities, but some are better than others. Some media can only tell simple 'stories' and facts like models, transparencies, posters and individual pictures. Texts, on the other hand, can present long stories, lengthy discussions and lots of facts, but they have to come to life in the minds of the people. Radio can do the same, and more lively, but by using only one communication channel.

On the next page an attempt is made to bring together in one cross table what has been discussed on the relationship between media, formats and learning objectives.

Advantages of a media mix

As was said at the very beginning of this chapter, each medium has its strong and weak points with regard to educational qualities, reach, flexibility and appeal. Ideally, communication strategies and educational programmes should involve a mix of media that are complementary in their qualities. In the classroom, various media are combined, such as interpersonal communication, books, blackboard, charts, models and electronic media. In extension, a media mix is used for national campaigns which propagate new ideas and/or prac-

Table 3. *Media, formats and learning objectives*

	Learning objectives			
Format	Entertain	Inform	Interest	Instruct
Factual presentation		Print media Television Radio Film Video	Print media Television Radio Film Video	Manual Guide Model Slides Filmstrip Video Transparencies Brochures
Discussions			Drama Group discussion Television Radio	
Stories	All media		Print media Television Radio Film Filmstrip Video Drama	

tices. Campaigns have been launched in many countries in virtually every facet of rural development, e.g. in the areas of agriculture, nutrition, family planning and primary health care. Well documented campaigns are the 1973 'Man is Health' campaign and the 1975 'Food is Life' campaign, both in conducted in Tanzania. Both campaigns, conducted on a national level, were built around organized, village-based study groups. Basic elements included a weekly half-hour radio broadcast, an accompanying textbook with a specific chapter supporting each radio lesson, and trained group leaders supplied with study guide manuals. Radio was also used in a variety of ways to encourage enrolment. Songs written especially for the campaigns were promoted, and catchy commercials were aired frequently. Additional promotion materials included posters, press releases, and T-shirts and dresses bearing the campaign logos (FAO 1990a:2-3).

Lessons to keep in mind

What seems to be accepted practice in campaigns and well-equipped schools should in fact also be a rule in other forms of communication and education, irrespective of the level or scope of the communication event. Various media can complement each other because each and every medium has its own educational potential. Some media are better for information dissemination, others for instruction or motivation. Combined, they may succeed where a single medium falls short.

People use numerous media to communicate with, ranging from traditional to electronic ones. As Schramm (1977) pointed out, people learn from any medium or audiovisual material, whether it is intended or not that they should learn. Technological sophistication, or fashionable design, does not necessarily lead to better learning or communication results. Simple materials may be just as effective.

It is important for people to interpret messages as they are intended and learn what they are supposed to learn from a material. In this respect, conventionality of the media and the learning objectives of the communication event are factors which one should keep in mind. People need to be familiar with the conventions of the media in order to be able to understand the message. The message format and the medium have to match the learning objective in order to achieve good learning results.

8.

The media in rural development

After independence, most developing countries established national television and radio broadcasting systems to support the process of creating national unity and to propagate the interests of the ruling party. This was done partly for political and partly for developmental reasons. Donor agencies underscored the development potential of the mass media and assisted local governments in the establishment of facilities and the training of broadcasting personnel. In several countries, ambitious distance education projects were set up. Few of these projects proved sustainable and overall the impact of the mass media on rural development processes remained modest. The reasons for this were economical, political as well as ideological ones and are *grosso modo* still valid today.

Over the years, governments have become more concerned about the human dimension of development, but mainly in words and not in action. More communication facilities and hardware have been acquired but not for the benefit of rural development. Mass media are still used for political propaganda, to serve and promote government policies, campaigns and commercial interests.

Smaller media, on the other hand, have a long history in rural development. Slides, filmstrips and trinted materials have been used extensively in campaigns and to support training and extension activities. Like the mass media, they usually have a top-down orientation, as they are developed by subject-matter specialists and used by trainers and field agents to facilitate the delivery of their message.

The use of media for awareness-raising and empowerment of the people has been promoted by participatory development projects, most of which were supported by non-governmental organizations. In these projects, media are used to stimulate community discussions and to express the views of the community. Self-management of the production process is propagated, and the media which suit this purpose best are drama, local radio and video, and a number of 'little' media.

After this brief introduction the various media pass in review one by one. The advantages and disadvantages of the media in rural development programmes are discussed in some detail.

Television

Television undoubtedly is a compelling medium. It easily attracts audiences and the viewer does not have to be literate to understand the message. Compared to radio, television has the extra advantage of the visual dimension. Television is a prestigious and powerful medium. It is a medium with authority and audiences attach considerable credibility to the information it broadcasts. Potentially, television can serve large audiences at competitive cost, provided the infrastructure is adequate and the audience's access to the medium well-secured.

However, despite the massive amounts of money being funnelled into it, television in developing countries still reaches relatively few people and is very expensive to operate. In Africa, the high cost of a television receiver, which can be as much as an average annual income, and the lack of electricity and broadcast signals in much of the continent are obvious handicaps in using television for rural development (McLellan 1986:104). Even in Ivory Coast, where an extraordinary effort has been made to blanket the country with television signals and where one in every 20 inhabitants owns a television receiver, the educational impact of this medium is modest. A UNICEF/Ministère de la Santé study showed that only 12.4% of the population living in the interior said they were informed by television. The study, which included 331 respondents in 48 villages around the country, revealed that 65% got their news and development information from the radio (McLellan 1986:139). This despite the fact that educational television is a well-known phenomenon in Ivory Coast which was boosted in the mid-seventies through the Out-of-School Educational Television (*Télé pour Tous*, 'TV for Everybody').

The *Télé pour Tous* (TPT) programme was primarily designed to reach the non-schooled and out-of-school audience of (rural) adults and youth of 15 years and older with educational and informational messages. The out-of-school television broadcasted two half-hour programmes a week following the evening news. The programmes, cast either in a more dramatic or a more didactic mould, and accompanied by French commentary, started in 1973. Three years later, they could be received by an estimated 200,000 privately owned television sets as well as in approximately 1,800 urban and rural primary schools which were equipped with a TV receiver. In these schools, one of the local primary schoolteachers was charged with organizing a group of people who watched TPT together.

Despite the high expectations, *Télé pour Tous* failed to meet its objectives. The highest number of communal TPT spectators was reached in the first year of operation with an average viewing of 16,024 spectators. This represented 4.3% of the potential target audience who had access to identified animators. In the following years, the average figures declined, despite a natural increase in the size of the potential target population, an expansion of the TV school system and the obligation for all primary schoolteachers to animate TPT sessions.

Although all segments of the village population were reached by the TPT programmes, the more regular watchers of the programmes were the younger, literate males. The reasons for watching TPT seemed not so much related to the internal characteristics of the TPT programmes or the TPT reception situation, as to the characteristics of television in general. Major shortcomings were the lack of relevance of the programmes for the specific target groups, the pedagogics of the programmes which was at the level of children rather than at that of adults, and the fact that the teachers were neither trained nor paid to be animators of adults (Lenglet 1979)

Although *Télé pour Tous* was not a success, there is no doubt that television can contribute to bringing about progress and change when the conditions are right and the facilities are there. Right across the African continent, television has been put to work for the promotion of the agricultural sector and sometimes with positive results. McLellan (1986:104-5) quotes a number of successful examples such as 'Operation Riz' in Ivory Coast, which succeeded in making the country self-sufficient in rice production in two years. In this campaign, television broadcasts supported by other media and extension workers contributed to making the public aware of the campaign and taught rice-farming techniques. When the campaign ended two years later, rice production fell. In Burkina Faso, millions of trees were planted following a multi-media campaign that involved television programming on the utility of trees, their role in rainfall and soil conservation.

Some recent studies on the use of television in family planning campaigns equally demonstrate the influence of television. For example, in Brazil, in 1989, a humorous animated TV spot helped increase the monthly average number of vasectomies performed at the advertised clinic from 347 to 627 per month. In Enugu, Nigeria, visits to a family planning clinic increased from 50 to more than 120 per month after a 1987 TV variety show incorporated family planning themes in its drama segments and TV spots gave the clinic's address. Some 45 percent of the clinic's clients cited the show as their source of referral (Development Communication Report 1990/4:5).

Television is suited to inform people, to create awareness, to stimulate interest in a topic, to influence opinions, and to render credibility to the work of extension agents. It may even motivate people to take action: e.g. to buy certain products, to donate money to a relief organization, to separate organic from anorganic garbage, or to cast their vote in elections. The medium has its limitations when it comes to modifying attitudes, to changing strongly-held beliefs or values, and to teaching practical skills. The producer of the *Télé* *pour Tous* programme had to admit that television has a very modest influence on the actual teaching of farmers. "Television is best used to support or complement other media and extension services (...) The problem is developing the right materials and know-how to penetrate the rural psyche which isn't easy considering the increasing gap between city and country" (Ketta, cf. McLellan 1986:105).

Because the majority of producers and directors of rural educational programmes lack the know-how, willingness or resources to 'penetrate the rural psyche', many of the programmes are of poor quality, irrelevant and boring. A study following a television series on farming in rural India showed that half the audience consisted of children. Farmers hardly watched because the programmes were not sufficiently entertaining to command their attention after a hard day in the field. The programmes also lacked credibility because the villagers themselves were rarely depicted on the screens (ibid.:106).

A very common complaint of farmers about agricultural programmes on television is that the information is not relevant to them or passes too quickly for them to understand. This, of course, is the difficulty with centralized broadcasting. "By trying to be all things to all people it ends up really communicating with no one" (ibid.:108). This can only be improved through decentralized programming and the localization of broadcasting. However, local television stations are rare in developing countries.

Radio

Large investments in television infrastructures are putting pressure on the communication budgets of most developing countries. In a country like Zaire, just paying off the debt incurred in building the television infrastructure and keeping the system in operation is reported to swallow up 90 % of the government's communication budget. This leaves no money for the local production of television or radio programmes. The result is that not much is being done in the way of development education through either mass media. According to the former director of Senegal's *Radio-Rural*, small radio stations could be established in every town in Senegal if the radio section had the television section's budget (McLennan 1986:139).

Because television reaches relatively few people and because of its expenses, many development professionals and communication specialists still consider radio to be the most useful mass medium for developing countries. It is an important source of information for illiterates. Although it is less prestigious than television and lacks the visual dimension, radio need not be less entertaining or less convincing than television.

A famous case of radio influence took place on October 30, 1938. On that day Orson Welles and the CBS radio theatre group put on the air a play about an imaginary invasion from Mars. Before the evening was over, thousands of listeners were in a state of panic. Thousands of calls were made to police stations and agencies of the federal government. People tried to warn friends, and a number of people packed the family and a few personal goods into their automobiles and drove away as fast as they could from the American East coast, where the invasion from Mars was supposedly taking place (Schramm 1973:189).

Most radio stations in developing countries lack the resources and skills to produce programmes that are so convincing. But, for development purposes a similar level of involvement is also not necessary. What is important is that the programmes are informative, entertaining and captivating. One does not need to be Orson Welles to achieve those standards. Many experiences demonstrate that in all countries talent of local people can be tapped to write and perform radio drama in support of development programmes. Unfortunately, most educational radio programmes in the Third World match the ones on television: they are rather boring and largely consist of studio interviews or straight radio talks. The content is either so general or so specific that it has no relation to the everyday problems of the audience.

The educational potential of radio is very much the same as that of television. Radio too, is an excellent medium to inform people with, to make people aware, to stimulate interest and to influence opinions. Like television, radio is a one-way communication channel with limited possibilities of feedback. Many projects and programmes have tried to establish a feedback system by encouraging people to send comments and questions regarding the programme, either in writing or on tape, to the programme producers. These comments and questions are then discussed in one of the next programmes. These systems of feedback are used in correspondence education and in projects where listeners are organized into radio listening groups.

In radio listening groups, or radio forums, interested people form a learning group to discuss development issues, acquire relevant information and learn new techniques. The main source of information is the radio programme to which they listen collectively. The radio programmes are being supplemented with written materials and, usually, a local teacher or extension officer provides an element of interpersonal communication. In a report, Dominic Mutava (1987) claims that in Zambia these so-called Radio Farm Forums have been and still are very popular. They not only serve as a source of education and training but also provide entertainment for the groups. The number of Forums increased from 437 in 1969 to 817 in 1986, spread all over the country. Each Radio Farm Forum is composed of a group of 15-20 members. If all members in the country attend, this represents an audience of about 16,000. Although to some this may not be an impressive figure, to Mutava it is clear that the Forum approach "has actually proved very effective in providing agricultural information to the rural population" (ibid.:152). However, he identifies the following bottlenecks which have had a negative effect on the whole operation:

- Although the groups can ask questions it always takes a long time to get a response - Mutava notes that the Zambian mail system is not the fastest in the world. Besides, the number of questions answered on the air depends on the availability of broadcast time. This causes delays and frustrations;
- the Forums regularly suffer from poor radio reception;
- batteries are a scarce commodity in rural Zambia and radio repairs take a very long time;
- members shift from one home to another since fields are usually scattered due to scarcity of arable land and space. This disrupts listening patterns and group cohesion;
- members of some religions do not like specific programmes. The Seventh Day Adventists for example, object to programmes about pigs and tobacco. This creates divisions among members of the groups;
- supervision of the Forums is extremely difficult during the rainy season due to the condition of the roads. In other cases there is an acute shortage of staff and transport;
- printed materials have no or little use in remote areas where most of the peasant farmers cannot read. They depend entirely on listening to the radio with all its limitations. For the same reason, written answers to questions coming from the groups are not appropriate.

What was observed with regard to the relevance of national television programmes, also applies to radio. To make the programmes more relevant to the needs and circumstances in the rural areas, localization of programming seems to be a necessity. It is often not appropriate to confront rural people with problems of a worldwide or even national nature; they need to examine the problems of their own village or town, such as the water supply, the use of fertilizers on their fields, the health situation of children etc. Radio programmes should ideally raise these topics set within the local context and preferably in the local language. On the part of the producers this requires a solid knowledge of the local situation, a mastering of the local language, and empathy with the local audience.

Local programmes can be achieved even within the national broadcasting system provided there are capable producers and enough resources to collect local inputs for the programmes. An example of an apparently successful project following this approach is the Mahaweli Community Radio in Sri Lanka. This UNESCO-assisted project was built on the experiences of 'Baandvaerkstedet' (the Tape-Workshop), a public access department of Radio Denmark. In the philosophy of the project, the traditional way of making programmes, where the producer pays a short visit to a selected village and records a few interviews with contributing farmers, will not generate real motivation among the rural listeners. Ideally, the farmer needs to know the producer and trust him before they, together, can produce a communicative development message. According to the project philosophy, the producer must live with the villagers for some time before he can expect a reasonable result (Ebbesen 1986:97). The Mahaweli Community Radio developed the following routine:

- During week one the production teams live in the village, talk to the people, conduct interviews and collect all sorts of local sound-material; whenever possible, the villagers are encouraged to participate in the process of planning and recording.
- Week two is spent in the office where the producers will monitor all their recordings and plan the editing and mixing of the programmes.
- In the third week a complete set of equipment for the production of radio programmes including a power supply is brought to the village. The equipment is arranged as an open-air studio at a suitable place in the village and all editing is done in public. The villagers are consulted about the editing. All programmes are monitored and evaluated in the village before the team leaves at the end of the week.
- The programmes are broadcast the following week.

Apparently, this approach resulted in radio programmes which had a significant impact on rural listeners, and the Sri Lanka Broadcasting Corporation expanded production to cover daily broadcasts from three regional stations in 1985. Also a small local community radio station was opened based on the same approach. Girandurukotte Community Radio caters for some 25,000 settler families and appears to have been a success from the very beginning (ibid.:99).

Ebbesen admits that the process of participatory broadcasting is very time consuming, especially when people are involved who are not trained in communication. "Often it is impossible to get a straight answer to a question. To get the desired result it may be necessary to adopt the format of a conversation and not ask for a statement. (...) Try to instruct the participating villager to rehearse his contribution and the important spontaneity and authenticity will vanish and the programme will lose its credibility. A prepared script will not solve the problem as only very professional broadcasters or actors can read a script in a convincingly natural and unsophisticated manner. The only practical solution is to get the genuine village conversation recorded on tape and then, through careful editing, make it suitable for use in the programme" (ibid.:99). The time-consuming nature of the approach combined with the required mobility of the production team may form a handicap for most radio stations in developing countries.

Another strategy in localizing radio programmes consists of establishing local radio stations which serve a small area. Local radio stations have a long and successful history in Latin America. Examples are Radio Bahá'i in Ecuador and Radio Sutatenza in Colombia. Radio Sutatenza, which broadcasts under the umbrella of Acción Cultural Popular (ACPO), was founded by Father Jose Joachim Salcedo in 1947, and thirty years later, the home-made transmitter had developed into Colombia's largest radio network, serving upward of 20,000 radio schools and some hundreds of thousands of students broadcasting educational messages.

The rationale of local radio stations is that through participation of the beneficiaries the stations become the mouthpiece of the local community. The programmes can satisfy the local aspirations of the people whom the station serves. In this respect, local radio needs to identify completely with the interests of its local population, and listeners need to identify with their station. The radio staff has to find out the concerns of all people, what problems they face every day, and what kind of information they need to make better sense of their life. This requires certain attitudes, skills and empathy on the part of the producers. Producers need to know how to conduct fieldwork and they need to be able to play the role of participant-observer in order to study the attitudes and culture of local groups. This is particularly true for producers who are not native to the area. Local radio also implies that people are encouraged to visit the studio and that the community participates in the management of the station.

Especially in countries with few telephones, irregular postal service and often impassable roads, local radio stations can serve as an multi-purpose means of communication. The costs of setting up local radio stations are not all that high. Simple stations can be equipped for a few thousand dollars. Local radio has the potential to close the knowledge gap between urban and rural listeners and it radically increases the use of existing development services. However, the irony is that the countries who stand to gain the most from local radio are the ones with the least resources. "The same conditions that make it difficult to fund radio systems also create immobile extension services and absentee teachers. In economically constrained countries, field extension staff are usually undertrained and poorly motivated. Information and knowledge just do not reach the people who need them most" (Laflin 1989:6). In the face of budgetary constraints, governments have to decide on the distribution of scarce resources between several rural districts or a single large urban centre. To choose for the latter is very tempting. The urban constituencies are usually more consolidated and powerful, while it may not be possible to satisfy all rural districts, which calls for uncomfortable choices and justifications.

Governments have a number of reasons to insist on centralized and modern media. In contrast to national television and radio, local radio does not qualify as a symbol of development and modernity. Local radio is also regarded a security risk. National radio stations can be better protected from coup attempts and are easily controlled. Local radio is remote, difficult to secure, and difficult to monitor or censor especially when it broadcasts in local languages. And, it is believed to be a threat to national unity and integration. Legitimization of local languages and identities often seems destructive. Unless there is a conscious policy to promote the expression of local opinion and to mobilize local communities, most governments sustain, control and protect national broadcasting systems at the expense of local radio stations (ibid.:6).

Audio cassettes

The potential of audio cassettes as training and communication media has not been sufficiently recognized. It is a low-cost medium and especially useful in conjunction with extension and rural radio. In comparison with open air radio, audio cassettes have the following advantages: (1) taped programmes can travel to areas where there is no broadcasting reception, (2) illiterate listeners can use the tapes to record their questions and reactions to the programme before sending the tapes back to the producers, and (3) the information is less prone to censorship or scrutiny because it avoids public communication systems. From an educational point of view, the biggest advantage of using audio cassettes is that (4) it allows the audience to listen to the tape whenever it suits them best, and (5) to listen to the tape as many times as they like, or they find necessary to get the message. Radio (and television) broadcasts offer continuing programmes according to specified time tables. If the audience happens to miss (part of) the programme for whatever reason, it is too bad for the listener. The opportunity has passed. Cassettes and other media like reading materials offer a great deal of flexibility to the user. They can be used/consulted according to the opportunities, daily routine and needs of the audience.

In comparison with radio, audio cassettes have the disadvantages of transportation - the tapes have to be delivered to the listeners -, the cost of the tapes, and the need for the audience to have more sophisticated equipment. However, simple cassette players are widely available and not very expensive. Often they are combined with a transistor radio. A serious problem may be the retrieval of cassettes once they have been issued to the listeners. One way of minimizing the loss of tapes is by asking a deposit for each cassette from the users (Stetter 1986:28).

In Kenya, the St. Mulumba Parish at Makongeni for years has been using cassette programme for conscientization and community action, in combination with newsletters and community meetings. The parish comprises several housing estates in the industrial area of Thika, where about 8,000 people live. The people are mostly unskilled labourers working for the local factories, and members of the different tribes that make up the Kenyan nation. They are cut off from their families and villages, and are faced with job insecurity and overcrowded living conditions.

To encourage some basic community cohesion the parish is divided into Small Christian Communities (SCCs) of 20 to 25 people. The representatives of the SCCs meet once a week in pastoral counselling sessions. Once a month a parish newsletter is produced, *Habari Zetu* ('Our News'), which carries dates and venues of SCC meetings, announcements of local activities and celebrations, and analyses of social problems on the estates and in factories. A cassette programme is produced every two months. The success of this medium lies in the fact that it gives group members a chance to speak out and thus contribute to decision-making. Along with the cassettes, group members are trained to write radio plays, songs, interviews, news and commentaries. All the programmes are discussed at the weekly meetings, which serves as a means of ongoing training. Every newsletter and cassette programme has a particular theme. It usually covers whatever topic has dominated group discussions over the previous months, for example: church and African culture, security on the housing estates, youth training, sex education, consumer cooperatives, etc. Cassette programmes are 60-90 minutes long, follow the formats of broadcasting and are written and produced by different teams. The concerns of the community are articulated through drama, demonstrations, workers' songs, proverbs etc. Several meetings are given over to listening to the programme. Each item is discussed, and feedback appears in the minutes of each group. If the reaction is of general interest, it may be included on a subsequent cassette (Stetter 1986:27-28).

In South-East Asia, radio cassettes were developed for a regional non-formal education project in order to support the wider dissemination of the proposed educational model. The model, which propagated self-help through learning, had been found successful in a number of pilot villages and was accepted for wider dissemination by the governments of Thailand, Indonesia and the Philippines. For this dissemination, training strategies and materials had to be developed, not only for the authorities and educators who had to support and introduce the educational intervention model, but also for the villagers who had to actively participate in and implement the learning activities. The project aimed at the production of training materials, that would ideally be self-instructional for the authorities and educators as well as for the villagers. It was hoped that all 'actors' involved, irrespective of their level, would know the principles of the intervention model and know their tasks in the implementation process once they had studied the training materials. Awareness of the fact that many adults in the rural areas lacked proficient skills in reading, made one decide that the training materials aimed at the village level actors would rely heavily on taped cassette programmes. To make the programmes instructive as well as entertaining, the content of the training was presented in the form of radio drama. In the drama a fictitious community completes the whole process of discussing, accepting, implementing and evaluating the educational model. The radio play was made up of sections, each of them dealing with an important step in the educational process, e.g. a community meeting to discuss the prospects of adopting the approach, the identification of problems that beset the village, the formation of learning groups, the planning and implementation of learning programmes, etc. Each section consisted of a dramatized play about the topic under discussion, an introductory and summarizing commentary and a set of self-testing questions. The cassettes were accompanied by simple booklets in which the main issues are summarized by way of drawings and simple captions (Epskamp 1991:36).

The cassettes were received well by the villagers partly because of the format of their contents, partly because of the versatility of the medium. The medium was particularly liked because it enabled the audience to listen to the cassettes individually or in groups, at home or during group meetings, at any time that suited them, and even while they were engaged in other activities such as household chores (ibid:36).

Teachers' meeting in Irian Jaya, Indonesia
Photo: Roel Burgler

BEST COPY AVAILABLE

Cassettes can also be used for updating the technical information extension agents and trainers receive. Pre-recorded cassettes provide a good way of helping them stay in touch with new technical developments in their field. And, cassettes can be used as 'audio letters' serving as a communication link between villages. An extension agent can record interviews and statements in one village and play them back in others (Oakley 1985:51).

Film and video

Around the world, film is one of the most popular mass media and it reaches millions of people every day through cinemas and telecast. Films by Spielberg and classics like 'Gone with the Wind' and 'Love Story' draw large audiences almost anywhere in the world. Even in the poorest of nations, people are eager to pay entrance fees to see the miracle world of the screen. In India, a country with an average production of two feature films per day, every week close to 100 million people go to movie theatres. People are drawn to the theatres to forget about their daily chores, to dream away, to be entertained, and to see their favourite star actor(s). The majority of films produced in the world are made for commercial purposes, i.e. to sell dream-time to an audience that wants to be entertained. Far fewer films are made with the purpose to document events that may provide the audience with interesting information or knowledge, or films that are produced with educational aims in mind. These types of films are hardly shown in movie theatres because they are not interesting commercially. A newsreel preceding the main movie often is the only 'educational' item in the cinema programme.

Educational films have to find their way to the audience via television, schools and community viewings. In the rural areas of poor countries where television sets are scarce and schools are poorly equipped, community viewings are the only outlets for these films. Quite a few developing countries have mobile film units which support the extension activities of the ministries. Vans with film equipment travel through the rural areas according to a prearranged schedule, and stay one night in each community to show a number of films. As far as I know none of these mobile film units has been claimed a success. In most countries they have been a liability rather than an asset. Firstly, the films shown are mostly of foreign origin and have little relation to the local conditions. Many countries, especially those in Africa, lack the resources, facilities and expertise to produce local films. Secondly, the main logistical bottleneck is the poor reliability of transportation. Especially in the bigger countries where distances are enormous and roads are in bad shape, it is very difficult to keep the fleet on the road. Maintenance of vehicles is usually poor due to negligence and lack of spare parts and automotive skills. Thirdly, the necessary coordination between the film units and the local extension agents about the time of viewing is often lacking. Unless extension staff is present during the show, the educational value of the meeting is minimal. The crew of the film unit usually consists of a driver and a projectionist who lack the know-how to introduce the film or to lead a discussion afterwards. Without this educational framework, people in the rural areas consider film shows to be a form of entertainment, not a source of information.

There are other limitations to the medium which make film less suitable for rural extension. Apart from being expensive, films take several months to produce. For these reasons, they are only worth making if they can be shown many times over a number of years. Hence, film is not a good medium for topical information which soon becomes out of date (Oakley 1985:53).

In recent years, the use of video has increased tremendously and is rapidly replacing the use of film shows. Film relates to video as national broadcasting relates to local broadcasting. Films with an educational character are produced by national (government) agencies and distributed to the audiences via governmental services. Like national television and radio, the films originate from urban centres and are intended to be shown around the country. This means that they cannot possibly be relevant and/or credible to all people.

In India, the Centre for the Development of Instructional Technology (CENDIT) conducted an evaluation of family planning films produced by the Government-owned Film Division. Interviews with the makers revealed that the films are produced in a vacuum because the nature of the 'rural audience', their aspirations and attitudes are not clear to them. No personal experience or research study informs them, nor is there any systematic feedback mechanism. To make the films understandable to the various ethnic audiences the films are dubbed in more than a dozen languages. Not surprisingly, evaluation made clear that the films were not found to be credible by the audience and the messages were not taken seriously. The films were liked because of their 'moving' quality but not seen to be real because the people in the films dressed differently and did not behave as the members of the audience did. Women who watched the film *Actual experience*, a film featuring frank interviews with women who have used an IUD, rejected it almost outright. They found the women in the film shameless, because they talked about these personal matters in front of the camera. This film was actually one of the rare ones meant for rural audiences - as a testimonial for the use of IUDs - and featured a mixture of urban and rural women from different regions (Gosh 1986:124-125).

Video compares to local broadcasting in the sense that it easily allows local production of programmes. The equipment is portable, flexible and fairly easy to operate in field situations. A major advantage is that video recordings do not require processing. Once recorded, they can be played back immediately. These qualities of the medium make it possible to produce programmes on location with the participation and inputs of the target audience. "Immediacy affects the audience as they see themselves instantly - the medium becomes credible. If they can see themselves in their own environment reflected on the screen, it is possible to believe that this screen tells the story of others like them, real and suffering, in other places and situations. Such immediacy also affects the spontaneous quality of response, and therefore, evaluation. Since the process is demystified and deglamourised, it is much easier to decrease the involvement of professionals and involve development workers, actual users in the process of media production" (Gosh 1986:128).

In 1975, Peru decided to support rural development through education and training and began its first effort in the systematic and massive use of video for education and training in rural areas of the country. The video project received funding from FAO and UNDP and was carried out by CESPAC (Audiovisual Center for Educational Services) a department of the Peruvian Ministry of Agriculture. The project was intended to recover, preserve and reproduce peasant knowledge by using a multi-media approach. Video was used to enhance comprehension; printed guides - with many illustrations and few words - served as permanent memory aids. Interpersonal communication in group discussions served to reinforce practical learning. Audiovisual trainers worked in production teams of two, carrying out every task that was needed to create the video programmes and learning packages including research, videotaping in the field, editing, field testing and then finally using the teaching modules.

By the time the project ended in 1986 close to half a million peasants from the mountains of Peru had attended video-based courses on various relevant topics, lasting 5 to 20 days. Approximately 2000 training video programmes, each 10 to 18 minutes long, had been produced; 160 audiovisual specialists had been trained in video production and 280 group discussion leaders had learned to use audiovisual materials in the training process. When a video programme proved to be effective, the tapes were duplicated and distributed to the training units that needed them. Once the peasants became familiar with the CESPAC system, demand for teaching modules exceeded production capacity (Calvelo Rios 1989:7).

Video can also be used to increase self-expression, to make people critically aware of their situation and to promote a dialogue between groups of people and outside leaders; self-help projects can be stimulated and real progress made with the help of video. Video used in this way presupposes full participation of the people in the planning and production of the video programmes. It can put literates and illiterates on a more equal footing for the expression of their ideas and it creates opportunities for the silent majority to make themselves heard. Illiterate people can speak directly into cameras that are operated by their peers. These people decide what they want to say and, in most cases, how it should be presented and to whom. Video, like local radio, allows people to use the media to advance their own cause and directly participate in the process of defining and implementing development plans and schemes. Once groups have a better understanding of what they want and can do, and are comfortable with the medium of video, it can be used to communicate with government and project managers who want to help them. This two-way communication is virtually impossible with centralized television structures (McLellan 1987:145).

Participatory use of video has been propagated by (mostly) non-governmental organizations in Latin America, Asia and Africa. In India, the Centre for Development of Instructional Technology (CENDIT) has been experimenting with participatory video in Uttar Pradesh since 1974. In the village of Mirzapur, 40 kilometres from Saharanpur town, a group of landless peasants who supplemented their income by making ropes from wild grass growing in the forests, formed a producers' cooperative and managed to obtain working capital in the form of an advance from the bank. In the effort to organize the cooperative, video was used extensively to document the problems faced by the rope makers, to initiate discussions, to mediate between individuals and groups and to create mutual understanding. Taped programmes produced with the help of the rope makers of Mirzapur were later shown in the neighbouring villages, where rope makers were still struggling in isolation. Links were thus established between different groups, and the cooperative gained in strength (Srivastava 1985:12).

Another Indian organization which uses video as a tool for participatory development is SEWA, the Self-Employed Women's Association, the trade union of some 30,000 poor, self-employed women in Ahmedabad. Video productions are being used to create awareness, to organize women and to present their case to outsiders and authorities. "Operating video equipment is empowering, especially for grassroots producers. Appearing on a video, seeing yourself and telling your own story via video can be tremendously reinforcing and motivating. (...) people at the grassroots are at the very bottom of society's information hierarchy. They need to communicate their needs and concern to people at all levels and to receive many kinds of information but particularly from others whose experience is relevant to their situation" (Stuart 1989:10). Video enables communities to exchange experiences through an exchange of taped programmes, and officials can be made aware of community's problems through 'video letters', i.e. taped programmes in which villagers explain their case in words and images. In Mali, a UNFPA women's literacy project used video programmes to stimulate women to join literacy classes. The video programmes showed literacy training sessions and women from Sougoula and Ouelessebougou and other villages learning about farming and nutrition. These programmes helped women in other villages to overcome their hesitation and to get the approval of their husbands. The women in the villages where the classes were held came to know each other through the video tapes and they asked to see what the others were doing. One community inspired another via video tape (Stuart 1989:9).

In Brazil, the Kayapo Indians, who had adopted video for making cultural recordings, realized that it could also be used for important political purposes. In their struggle to protect their homelands from intrusion by development schemes, they used video to express their views directly to the Brazilians, the Government and the press. Afraid of the possibility that their views might be misconstrued when interpreted by the government, they wanted an accurate record of what was said and done to tell the outside world. They used video as a sophisticated way of controlling news about their situation. And the press proved to be very receptive to their videotaped message (Ogan 1989:4).

Although video is a versatile medium, one should beware of seeing it as a miracle maker. Video is a tool to be used in a social process and is no substitute for the social process itself. The action is carried out by the people, not by the video. "No amount of video can replace a good community organizer, no amount of video can make fuzzy thinking turn into clear social and political analysis. No amount of video can make bad strategy and tactics work" (Hénaut; cf. McLellan 1987:147). And like local radio and other participatory media, video can only be successfully used in a politically tolerant environment. The success of video in the promotion of social change depends to a large extent on political will.

There are a number of practical problems involved in the use of video which should be listed as disadvantages of the medium. They are:

1. Repairs. Video equipment is sophisticated and requires well trained technicians for maintenance and repair. In developing countries the necessary spare parts are often difficult to obtain.
2. Electricity supply. Video-filming can be done with batteries as a power source, but to show cassettes on monitors without a stable power supply is more difficult.
3. Cost. Although the cost of video equipment is coming down rapidly, especially that of the non-professional standard, it is still relatively expensive to purchase and to maintain.
4. Skills. If video programmes are to be used for more formal types of training, promotion or reporting, the quality of the videos must be good. This requires talent, (professional) skills and experience in producing video programmes.

Video can be effectively used for certain learning objectives but it can also be a waste of money, time and energy. In participatory development programmes, the use of indigenous cultural media such as drama, puppet shows, songs and dances, or simple group discussions may work out to be just as effective and much less expensive (McLellan 1987:148-49).

Slides and filmstrips

A medium with a long history in education, extension and training is the slide. It may not have the glamour and prestige of the movie or video film, but it is in no way inferior. The slide offers the possibility of projecting and enlarging a picture to a size which can be seen by a large audience. The viewer's attention is attracted and held by a bright picture in a darkened room. Slides are particularly useful in situations when one needs to illustrate a talk or lesson. Slides are extensively used in agricultural and veterinary training courses to show farmers new plant varieties, the effects of pests on crops, the characteristic signs of diseases, the labels of recommended fertilizers, medicines, etc. Any still object/situation that cannot be explained by words alone or carried into the classroom can be shown to the audience via slides.

Slides are very flexible and adaptable. They can be presented in any way that suits the purpose of the instructor/trainer and that of the audience. The instructor is in control of the pace, the language and technique used in the presentation. He can adjust the slides according to the reactions of the audience. The slide series can easily be modified or updated by replacing the slides that are no longer relevant or necessary. A talk which is fairly standardized can be recorded on tape and the slide projector can be synchronized with it to show the slides at the right moments during the talk. This slide-tape presentation approaches the effect of a film show, be it without movement, but at much lower cost of course. It lacks the spontaneity and flexibility of a live presentation but it has the advantage of a topic being presented in the way it was intended and thought out by the instructor. A slide-tape sequence can easily be altered and adapted by an instructor with a minimum of technical skills. Slides can be changed, the sequence altered, and the commentary revised as deemed necessary.

If slides are to be shown in a fixed order, because together they either illustrate a process or tell a story, they may be mounted in a single continuous strip of film. These so-called filmstrips are shown on special filmstrip projectors or on a slide projector fitted with a filmstrip carrier between the projector body and the lens. Filmstrips are primarily used for instructional or motivational purposes. The instructional filmstrip tells the typical 'how to' story. In 50 to 100 frames the audience is shown the process of potato growing, the daily maintenance of the wheeled tractor or the steps in constructing a piggery. The motivational filmstrips tell stories that look like films and read like books. The Development Support Communication Branch of the Food and Agriculture Organization (FAO) has produced quite a number of filmstrips, among them many beautiful motivational filmstrips with catchy titles. '*Una Vida Mejor*', situated in Honduras, is a filmstrip of 331 frames accompanied by a 52-minute audio tape. It is a love story about two young peasants, Juan and Rosita. The themes of soil erosion and forest destruction and the effect of these upon the lives of rural people are woven into their story. The filmstrip is part of a series of five which were designed to discuss the need for soil and forest conservation with hillside farmers. 'Children are like flowers' is a filmstrip of 81 frames situated in Sierra Leone. In this filmstrip, Yavo, a mother who has four surviving children, rears her children in the traditional way until a relative comes to visit the village with two of her four healthy children and shows her new health care techniques. The story emphasizes simple, economical practices that can help reduce infant mortality.

Slides and filmstrips can be produced at a fraction of the cost involved in producing a movie. The equipment for production and projection are also low-cost and fairly easy to carry around. Slides and filmstrips share some of the disadvantages of films, being that they can hardly be used during daytime, and that electricity is needed to operate the equipment. In general, however, slides and filmstrips are excellent training media for all subjects except the few for which showing movement is absolutely essential.

Slides and filmstrips have a long and proven record as valuable training aids in rural and agricultural development but nowadays they are overtaken by video despite the fact that the cost of video is much higher. This can be attributed to technical and psychological reasons. Video enables immediate playback of the recorded image, while slides and filmstrips require processing in laboratories to produce a presentable image. More important is a difference in appeal. Video has a much stronger appeal than slides or filmstrips because it is modern and it closely relates to the prestigious medium of TV.

Printed media

This group consists of a wide variety of media that have in common that they are all printed on paper. Printed media include posters, newspapers, pamphlets, books, charts, flip charts, flannelgraphs, manuals, leaflets, comic books, etc.

Printed media can combine words, pictures and diagrams to convey accurate and clear information. Their great advantage is that they can be looked at or read for as long as the viewer or reader wishes, and can be referred to time and again. Printed materials are relatively cheap, simple and easy to produce.

Posters

Posters are media that are explicitly aimed at attracting attention and by doing so either inform, seduce or intrigue people. Posters are useful for publicizing forthcoming events, for reinforcing messages that have been received through other media, and for stimulating the process of reflection on a particular topic or problem. Posters are displayed in prominent places where a lot of people pass regularly. For a poster to be effective it should be easy to interpret and it should carry a simple message. Simple in this respect does not necessarily refer to the degree of detail or information depicted on the poster. It rather refers to the message, i.e. the clarity of the idea that is being expressed.

Since posters are free-standing media they need to convey the message all by themselves. There is no instructor at hand to help the passers-by to interpret the message. The design of a poster is therefore very critical. Careful pretesting is advisable before the posters are put up in large numbers. Since illiterates cannot rely on text to help them interpret the visual image, the designers must make sure that the illiterate public will understand the visual image as it was intended.

Newspapers

Newspapers are not widely available in rural areas. The circulation figures, especially of those written in local languages, are generally modest and a failing distribution system is one of the bottlenecks in reaching the customers. The literate and more developed strata of the rural population read newspapers, and columns and articles on developmental issues are useful to create awareness of new ideas and to inform people of what other groups or communities are doing.

However, a serious bottleneck in rural newspapers is the lack of skilled personnel to write useful articles from a development perspective. Information officers stationed in the rural areas usually have received basic training in journalism which enables them to collect information and to write news reports. Yet, few of them are capable of writing features with a development orientation, which would be necessary if we were to make the rural newspaper an educational tool.

Charts

All sorts of photographs and drawings can be used to illustrate a talk and/or demonstration. They can be used individually or in sequence, they can be passed around among the students, held by the instructor or hung on the wall. The ones that are meant to be passed around are usually smaller, about A4 size, while the ones that are placed on the wall tend to have the size of a poster. Photographs and drawings that are hand-held, either by the instructor or by students, are called loose charts. They are used in the same manner as slides and have the same flexibility. The speed and order in which the charts are shown during a session can be easily adjusted according to the reactions of the audience.

The bigger charts that are fixed to the wall (or other object) are wall charts or teaching posters. The wall chart is usually made up of a series of drawings that constitute the steps in a process. Together with the teacher/instructor, the students read through the 'pages' of the process. This process may concern the preparation of a vegetable garden, the preparation of baby food, the construction of a grain storage bin, etc. The teaching poster usually depicts an event, a condition of something or someone, evolutionary processes, or relationships between items. Teaching posters are used by instructors to show, for example, the travels of Vasco da Gama around the world, the life-cycle of bilharzia, the variety of mushrooms to be found in semi-arid forests, or the food groups that make up a balanced meal.

Teaching chart, PBFL/Swaziland (Marina Maspero)

Charts and posters are excellent teaching aids, especially for groups of illiterates because of the minimal use of text. In comparison with other media, charts and posters can be produced very cheaply. They allow great flexibility in presentation and if made of sturdy material, they can be easily carried around to the remotest places. Critical aspects in the use of charts and posters are the level of visual literacy of the audience with regard to drawings, and the skills of the instructors in handling the materials to their full potential.

Flip charts

A flip chart compares to a chart as a filmstrip does to a slide. A flip chart combines a number of charts (drawings or photographs) in a fixed order. Because of this, flip charts are meant to illustrate processes or to tell stories. Flip charts are used in group meetings or classes by an instructor who 'flips' through the 'book of charts' while relating the appropriate story. Since they stay in one place during the presentation, flip charts must be big enough for everybody in the group to see the pictures. This may make them rather cumbersome to carry for an educator who wants to use them in the field.

Flannelgraphs

A flannelgraph is a medium in which cut-outs are placed on an adhesive board. It allows one to illustrate or make up a story while adding (or taking away) cut-outs of people, animals, plants, objects or other items one by one. The flannelgraph makes use of the adhesive qualities of rough surfaces. Materials with a rough or hairy surface, when placed against a similar surface, will remain in position because the fibres interlock.

The flannelgraph is a very simple but an extremely effective medium, if used correctly and with imagination. The flannelgraph provides a visual framework which can be clothed by the individual imagination (Saunders 1979:74). A subject can be built up bit by bit in visual form, sometimes employing elements of drama and suspense. As in movies, characters come and go, the scene may change and pictures may be moved around the scene. The flannelgraph is particularly suitable for participation by the audience. They can take part in the telling and retelling of the story by actually handling the cut-outs and creating scenes on the board (ibid:74).

Causal relationships may be effectively discussed with a minimum of materials. Probably much more effectively than through more sophisticated media, and at a fraction of the cost. The role of flies in the transmission of diseases can be pictured in a film or slide series with the risk that a close-up of a fly may upset the audience. By using the flannelgraph only three cut-outs are needed to explain the role of the fly: that of a fly, that of a child suffering from diarrhoea, and that of a child eating a plate of food. The fly can be made real size because the instructor can introduce the 'villain' by moving the cut-out closely to the audience and even imitating its flight and sound. The fly can then be shown to feed on the faeces of the affected child before moving onto the neighbours where it lands on the delicious-looking plate of the child next door. More ingredients are not needed to start a discussion with the audience on what will happen to the child next door and what to do to prevent the spreading of diseases by flies. Other causal relationships, such as the effect of population increase on natural resources management can similarly be explained with very simple means.

When used in outdoor teaching situations, the main enemy of the flannelgraph is a strong wind. Another threat is the lack of competency on the part of the instructor in using the flannelgraph effectively. Clumsiness in handling the flannelgraph draws attention to the medium and away from the message.

Reading materials

Simple reading materials such as small booklets, leaflets and simple manuals are relatively cheap and easy to produce. They can be taken home, be consulted and kept as permanent reminders. They provide a vitally important and cheap source of reference for extensionists, and for literates among the rural population (FAO 1989:18). However, the printed media that primarily contain script are only useful in areas where a reasonable proportion of the population can read.

Booklets and manuals contain more information than leaflets. Leaflets usually consists of a folded A4 sheet printed on both sides, illustrated with pictures or drawings. They can summarize the main points of a talk or demonstration, list the consecutive steps of a process, or provide detailed information on fertilizer application rates or names of seed varieties.

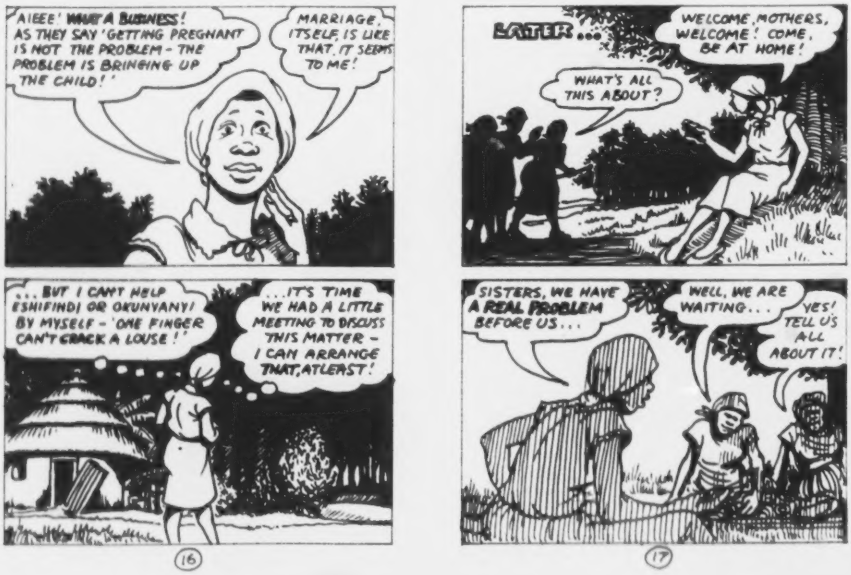
Manuals are more bulky than leaflets because they contain detailed instructions on topics like the use and maintenance of equipment, the cultivation of certain crops, or the design and installation of an irrigation system. Usually they contain lots of drawings and/or photographs to illustrate the text.

Comic books

Comic books come in various formats ranging from fairy tales and adventure stories to historical documentaries and instruction guides. The information is given through sequences of drawings which contain text balloons and/or simple text running below the picture. In developed countries, comic books have long been regarded as children's literature, and an aid to help children develop an interest in books. In fact, many educators and parents were opposed to the idea of comic books because they were afraid that comic books would keep children from developing proper reading skills. Similar arguments are now in vogue to warn against the negative influence of excessive television watching.

It may be that because of the fact that comics were considered to be children's literature, it was assumed that comic books might be a good educational medium for semi-literates and illiterates. However, over the years it has become clear that understanding visual messages is not 'child's play', but requires a lot of 'visual literacy'. Understanding the visual images of a comic book requires a sophistication of perception developed only after a good deal of exposure to reading and pictorial materials (Rana 1987:1).

Nevertheless, comic books may be effective materials for rural development because rural audiences find comic books entertaining and attractive, and because they are less expensive and less time-consuming to read than 'proper' books or manuals.


AIEEE! WHAT A BUSINESS! AS THEY SAY 'GETTING PREGNANT IS NOT THE PROBLEM - THE PROBLEM IS BRINGING UP THE CHILD!'
MARRIAGE, ITSELF, IS LIKE THAT. IT SEEMS TO ME!
... BUT I CAN'T HELP ESHIFINDI OR OKUNYANYI BY MYSELF - 'ONE FINGER CAN'T CRACK A LOUSE!'
... IT'S TIME WE HAD A LITTLE MEETING TO DISCUSS THIS MATTER - I CAN ARRANGE THAT, AT LEAST!
⑯
LATER...
WELCOME, MOTHERS, WELCOME! COME, BE AT HOME!
WHAT'S ALL THIS ABOUT?
SISTERS, WE HAVE A REAL PROBLEM BEFORE US...
WELL, WE ARE WAITING...
YES! TELL US ALL ABOUT IT!
⑰

Drawings from '... so, firewood can wreck a home'

A Moto Mwaka production for the Kenya Woodfuel Development Programme, 1985

Traditional and popular media

Every culture has its own traditional communication formats to inform and/or educate its people. They include initiation ceremonies, training through apprenticeship, instructional songs and dances, mythical stories, recitals of historical facts or religious commandments. These formats can be effectively used for rural development purposes. Songs, dances and plays can convey information in a very interesting way. When they are performed live they can be adapted to suit local situations and responses from the audience.

Traditional media do not require capital investments, do not depend on technology, and can be easily understood by illiterates. By involving local people in preparing the plot of a play, trainers can stimulate the process of problem analysis, which is a fundamental part of the educational aspect of extension (Oakley 1985:59).

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A similar level of effectiveness is attributed to those media which may or may not be indigenous and/or traditional in origin but which share the same characteristics with the traditional media, i.e. they are easily understood and very much liked by the population at large. These are so-called popular media and include theatre and puppet shows. Popular media need not necessarily be live communication events but can also be technologically transmitted, like soap opera's and novelettes.

The popular media and some of the traditional media can combine entertainment and education in a successful way. Creative use of these media can be a subtle and effective way of introducing development ideas and messages.

Theatre

What has made theatre a popular medium for a lot of development workers is its capacity to build on skills the people already have: the actors provide the songs, do the choreography, perform the dances, create the scenarios and are responsible for the themes to be developed. Theatre based on village situations exploits social reality, encourages audience participation, is expressed in local idioms and is accessible to the community at large (Byram 1981b; Kidd 1982).

In the 1970s, a new form of popular theatre evolved in Africa south of the Sahara. It was referred to as 'theatre for development'. In 1974 Ross Kidd, Martin Byram and Petra Rohr-Rouendall made the first coherent attempt to use theatre for development purposes. In Botswana they launched an annual campaign called *Laedza Batanani* as part of an extension programme in community education. The *Laedza Batanani* was a one-week programme involving performances by a mobile team of actors followed by community discussion. The programme dealt with local problems chosen by the community and by the extension departments. As much as possible, the organization involved the community at every level (Eyoh 1987:16).

The Botswana experience led to many similar activities in a great number of African countries: Swaziland, Zambia, Zimbabwe, Nigeria, Tanzania, Malawi and Cameroon. Although Boal's views on the role of theatre as an important instrument for creating a revolutionary consciousness served as a point of departure, over the years the approaches have become less confrontational and more pragmatic. The trend clearly moved in the direction of assisting village communities in developing a better awareness of their environment (Eyoh 1987:1).

The majority of these theatre programmes use the same research and development process to shape the scenarios for the performances. This process can be summarized as follows:

- gathering of information from the villagers regarding their situation, problems and expectations;

The power of expression
Photos: Ad Boeren

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- analysis of the data to better understand the major underlying problems of the community;
- selection of a theme for the performance;
- writing a scenario that illustrates a controversial issue in the community;
- rehearsals.

After the performance, the actors are to lead the audience to discuss the play and its content. It is hoped that the audience will jointly discuss the causes and possible solutions to the controversy, and will use the opportunity to initiate a plan of action to tackle the problem (Boeren 1992:261).

Experiences involving theatre for development clearly show that performances are capable of drawing large audiences, of generating a lot of enthusiasm among the crowd and of involving people in discussing issues collectively (Epskamp 1989). They may be instrumental in taking one step in the problem-solving process, i.e. bringing people together to make them think about their situation and discuss problems collectively.

There are, however, also several bottlenecks in the use of theatre:

1. In order to be community specific, the production of theatre plays is time-consuming. Campaigns are expensive because they involve a group of people for a considerable period of time. This is a prohibitive factor for most government agencies.
2. Although popular theatre is expressed in local idioms and is loved by the audience, in most countries it is not an indigenous way of presenting and discussing problems. Theatre for development is and remains an external intervention.
3. Development efforts involving a number of integrated services to the community need to be carefully orchestrated in order to make full use of the enthusiasm and momentum generated by the performances. In most cases this turns out to be easier said than done with the consequence that it leaves the impression with the community that false hopes have been raised (Boeren 1992:261-2).

Theatre for development can also be used as a learning and awareness-raising process by the community, very similar to the examples which were given of the participatory use of video. The process of developing a play about their own situation makes the participating community members very much aware of the underlying causes and interrelatedness of the problems. In addition, the 'project' serves as a learning process in which the participants learn skills ('applied research', problem analysis, drama making, theatre skills, discussion and evaluation) not in isolation from, but in relation to a practical 'operational' context (Epskamp 1991b:180).

Soap stories and radio clips

There is little doubt that the electronic media and media formats which originated in the North and have been introduced in developing countries are entrenched in everyday life and exert influence. Although many argue that especially in developing countries the mass media erode local cultures and contribute to the destruction of the cultural values and standards of the people, it is evident that around the world American soap series and video clips are immensely popular with the masses that have access to the media. Despite doubts about the blessings of these programmes for developing countries, their formats have been used for development support communication. In Nigeria, a 30-minute weekly drama serial called 'Cock crow at dawn' was broadcast by the Nigerian Television Authority. In the early eighties, 104 episodes were broadcast. The primary goal of the serial was to 'sell' large-scale mechanized farming through entertainment, largely to the upper and higher classes of the working population and the business community. The serial combined conventional documentary and dramatic styles to promote a social engineering cause. Through the everyday adventures of a number of villagers a struggle between progressive and traditional forces in a small rural community was depicted. Whether the series was successful in inducing behavioural change on the part of the target audience is not known. Apparently, it was popular mainly because of its entertaining qualities. According to a household survey, 70.1% of the respondents watched the serial chiefly for entertainment, while 11% recognized its thematic import (Ume-Nwagbo 1986:157).

The Philippines was one of the first developing countries to use mass media formats for development purposes. The government's food and nutrition campaign tried to get mothers to add some mashed fish and finely cut vegetables to the rice porridge which they fed their children after weaning. When a more traditional approach could not persuade Filipino mothers to increase the nutritional value of the rice porridge, or *lugow*, the government adopted a more aggressive approach taking its cue from the success of commercials. It began to broadcast short radio clips with a catchy tune and a short dramatization in which the mother, the daughter and the doctor find out why the new *lugow* recipe is so much better for the baby's health. The campaign worked and managed to reach women in remote areas. According to Manoff (1983: cf. Epskamp 1991b), the same approach was later used by Indonesia's Nutrition Education Improvement Pilot Project and in Brazil's breast-feeding campaign.

Multi-media campaigns

Multi-media campaigns form an illustration of an integrated approach to development. Many of such campaigns have been held in developing countries, notably in the areas of agriculture, health and literacy. In these campaigns, media and extension services work together, and information and inputs are delivered in a coordinated way. Not all of these campaigns can be claimed a success, however. Some have failed because of coordination problems, others because the ideas propagated did not coincide with the interests of the target group, some because the campaign period was too short and people did not have enough time to reflect on the issues, or further support was stopped before the changes had taken root. Fortunately there are examples of campaigns that are claimed to have been a success. One of them is the campaign that was associated with the 'Masagana 99' project in the Philippines. It was held in 1973 and was meant to catapult the country toward adopting high yielding rice cultivation. 'Masagana' translates as bountiful harvest with '99' referring to the project objective of achieving 99 sacks (50 kilos per sack) of unmilled rice per hectare.

The project was built around three main elements: 1) availability of high yielding seeds, fertilizers, and a simplified 16-step cultivation process; 2) credit assistance; and 3) a multi-channel mass information campaign extending over three months. The channel mix included radio broadcasting, a variety of print (bulletins, newspaper stories and posters), and intensively-trained field agents. Radio was used in three ways: a) to motivate - jingles and spot messages were broadcast up to 20 times a day; b) to inform - daily 30-minute farm programme; and c) to instruct - short courses were offered through the existing Farmers' University of the Air; those who registered received printed materials to use with the broadcasts. In addition, television was used to kick off the campaign and to report on its progress. After completion of the campaign, the daily farm programmes were intended to provide follow-up reinforcement.

By 1973, as a result of particularly poor harvests in the two previous years, the Philippines had to import a substantial part of its rice supplies to meet national requirements. Following the campaign in 1974, rice yields had increased by 28%, and by 1976 a 40% increase was registered over 1973 levels. In 1977 national requirements were more than met and the country began exporting its excess harvest. The project was later criticized, principally because of the farmers' low repayment of loans. Overall, however, 'Masagana 99' was declared a considerable success, in which the multi-media campaign played a significant role (FAO 1990:3).

In 1987-88, again in the Philippines, the Population Center Foundation tried a non-traditional approach in addressing the problem of increasing teenage pregnancies. The idea was to utilize music and media (radio and television) and link them to the Foundation's educational and support activities, featuring a telephone hotline staffed by experienced counsellors. The campaign had a time frame of one and a half years, was implemented in Metro Manila and aimed at young people 15-24 years old. Two songs were produced and commercially released accompanied by video clips. The two songs 'That Situation' and 'I Still Believe' were performed by singers who were very popular among Filipino youth. Commercials for television and radio were produced linking the problems in the songs to the possibilities for assistance offered by the services of the Foundation (the telephone counselling service 'Dial-A-Friend'). During the campaign, 'Dial-A-Friend' received 250 calls per week. Forty-five per cent of the callers were 15-19 years old and twenty-two per cent were 20-24 years old. In a post-campaign survey conducted eight months after the release of the single 'I Still Believe', 56% of the respondents claimed that the song had stimulated them to seek more information and to discuss the issues raised. Half of those who had heard the song had discussed it with peers and siblings (Silayan-Go 1990).

In Zaire, the National AIDS Programme launched a mass media campaign involving music, television drama, radio spots, calendars and comic strips. Some of Zaire's leading bands were involved in recording songs to warn against AIDS. Three songs were released in four month-intervals over a year and were guaranteed daily playtime through agreements with national and regional stations. The public response was positive. According to Convisser (1992), 'Step by step/hand in hand/ let's all fight AIDS...', the refrain of the first released song by the well-known Empompo Loway, could be heard on the lips of rural school children and sophisticated Kinshasa residents alike. In a Kinshasa post-test six months after the song's release, 65% of a sample of the target audience had heard of it. Of these, 90% could sing a verse or two on request. Most importantly, 93% of those who had heard the song retained the key AIDS messages and 85% of the same group said it affected their behaviour.

Zaire's best-loved drama group, Troupe Nzoi, staged a four-part radio/ television series aimed at the 'prospective parents' group. The drama, about a young woman who learns after her wedding night that her husband has AIDS, was the first mass media treatment of many sensitive AIDS-related issues in Zairian culture. The entire series was shown twice in 12 months, apparently with overwhelming positive response to the drama's realism and sensitivity. Comic strip artists designed three 1991 calendars for teens and adults, each featuring an eye catching comic strip on AIDS. The project claims that during the campaign period the increase in knowledge regarding AIDS transmission was considerable. The ratio of people who thought 'you can avoid getting infected with the AIDS virus simply by avoiding sexual contact with people who look 'sick'' dropped from 56% to 42%. The number of people who named condoms as their first mode of AIDS prevention increased from 5% to 13%. Over the course of the project condom sales through the Condom Social Marketing Project increased from 900,000 in 1988 to 18 million in 1991 (Convisser 1992:8).

Summing up

All media under discussion have been successfully used for rural development, except for a few. Of the mass media, television, newspapers and films have not proven capable of having great developmental impact. The reasons for this are linked to the limited access which the rural masses have to these media and the low relevance of their programmes to the people.

The issue of low relevance is not restricted to these three media. Most media which carry messages that have nation-wide coverage suffer from this weakness. Messages and materials that are produced for specific target groups and address specific problems perform much better. This can only be achieved through decentralized programming of the mass media or local production of the materials.

Local production preferably involves the beneficiaries. Their involvement may vary from brainstorming about the topics to be dealt with to the production of their own materials. In principle, all media qualify for local production, but some production processes are simpler than others. Practice has shown that the production of radio, drama and video programmes can easily be done locally. Of the 'little' media, flannelgraphs, charts and posters can easily be produced by the community.

The discussion of the media makes clear that the potential of a medium for use in 'the field' depends on a number of critical factors. Apart from the educational characteristics, these factors include the dissemination infrastructure, production facilities, familiarity of the audience with the medium, experience in the utilization of audiovisual materials, and financial resources. These issues are important considerations when media have to be selected for development programmes.

9.

Choosing the right medium

Every communicator and media developer dreams of having all the necessary facilities, abundant funds, and latest information that would enable him to produce and disseminate the best possible materials to all members of the target audience. Unfortunately, or fortunately, we do not live in Utopia and have to cope with the realities and limitations of the world we live in. Circumstances force us to choose the next best solution or the next best solution but one, and this is particularly true for developing countries where Utopia seems much more distant than in the industrialized world. Choosing the 'best' medium, for most media developers in the Third World, is a hypothetical case, because the lack of means or the prevailing circumstances do not give room for many options. In practice, one may not be able to do more than select the 'right' medium for the given circumstances, which, for that matter, is quite an achievement still.

Below a number of limitations are discussed which have an influence on the selection of media for development purposes. There are limitations with regard to the production, distribution as well as utilization of the media.

Circumstances

As does any production process, the development of educational materials requires adequate resources. These consist of production facilities, funds and materials, skilled manpower, expertise and management potential. In most developing countries, these commodities are in short supply, which is aggravated by deteriorating economic situations that hinder the import of raw materials, spare parts and equipment necessary for the production of materials and the dissemination of information. Most African countries are completely dependent on import for almost all equipment and materials involved in the production of media, including paper. The flow of these materials is very unreliable and depends on foreign currency allocations from government or donor contributions. Under these conditions, opportunities of developing a medium are reduced to one's making use of whatever happens to be available to put together materials.

Many countries also face serious logistic problems in delivering goods and services to targeted beneficiaries. These goods and services include information, education and training. In most cases this situation is caused by a lack of sufficient infrastructure, a shortage in human and financial resources, and weaknesses in organizational and management abilities. In previous chapters, the potential scope of the mass media in developing countries was described as largely hypothetical. The following tables provide some revealing figures. The first gives the distribution figures of radio and television receivers in a number of countries. It shows that in a poor country like Burkina Faso, with a population of 6.75 million, only 24 out of every 1000 inhabitants had a radio, and only 5.3 out of 1000 owned a TV set in 1986.

Table 4. *Per capita income and distribution of receivers*

Country	GNP per capita (US Dollars) 1986	Number of radios per 1000 inhabitants 1986	Number of TV sets per 1000 inhabitants 1986
Burkina Faso	150	24	5.3
Bangladesh	150	40	3.1
Nepal	150	30	1.3
Zaire	160	97	0.5
Haiti	330	30	3.7
Bolivia	600	587	102
Peru	1090	247	84
Japan	12840	824	585
United States	17480	2126	813
Switzerland	17680	834	411

Source: UNESCO World Communication Report 1989

The table on the next page compares the circulation of newspapers in Burkina Faso and Kenya. The figures are of rural newspapers written in local languages. Kenya is one of the more prosperous and populous (1986:21.16 million) countries of Africa.

These figures indicate that in countries with similar distribution figures, radio, television and newspapers only reach a small percentage of the country's population. This puts severe limitations on their use as carriers of information and education messages for the population at large.

Table 5. *Distribution figures of rural newspapers in Burkina Faso and Kenya*

	Name of newspaper	*Language*	*Circulation*
Burkina Faso	Fasobaara	Jula	3 000
	Manegre	Moore	1 250
	Manegda		
Kenya	Kisomo	Kikuyu	10 000
	Sauti ya Kericho	Kiswahili	6 000
	Sauti ya Gusii	Kiswahili	6 000
	Sauti ya Pwani	Kiswahili	8 000
	Nyota ya Mashiriki	Kiswahili	5 000
	Sauti ya Meru	Kiswahili	5 000
	Nyota ya Magharibe	Kiswahili	5 000
	Jicho	Kiswahili	5 000
	Nuru	Kiswahili	5 000
	Maarifa	Kiswahili	5 000
	Mwangaza	Kiswahili	5 000

(UNESCO World Communication Report, 1989)

In the planning of extension campaigns and educational programmes these facts should receive serious attention. Not the theoretical distribution potential should determine the choice of a medium but the actual distribution situation prevailing in the country. Maybe traditional channels of communication have a better coverage than the so-called mass media. The country might be gifted with a reasonably functioning network of government and non-governmental services, sending extension and educational messages to all corners of the country. In this case it makes more sense to develop and distribute educational materials which can assist field-based officers and educators in their daily work. Media which are very suitable for this purpose are all sorts of group media and printed materials. Local conditions and resources will determine which of these media are appropriate and effective for the purpose intended. It is a waste of energy and money to equip extension officers with filmstrip projectors and folding projection screens, if they cannot rely on transportation. One cannot expect extension officers to burden themselves with such equipment when everyday practice requires them to travel to their audience by bus and on foot. Under these conditions, the only media that suit the conditions are compact, sturdy and lightweight materials like small (flip)charts, pictures, leaflets and, if well-designed, portable flannelgraphs.

Utilization

Another critical issue which determines the effectiveness of audiovisual aids is whether the users, i.e. the educators, extensionists and instructors, have the skills to use the materials effectively. The effect of a well-produced educational aid can be ruined if it is not properly used by the educator. This has educational and practical dimensions. Educational aids have to be used as part of an educational plan, integrated into the educational methods employed to obtain a certain educational objective. The material's main role is to assist the educator in his educational task during a lesson or extension meeting, not to replace him. This implies that the material has to be slotted in at the right time with a proper introduction and follow-up. An educator who uses educational materials so that he can lean back and relax, certainly uses the wrong approach.

The practical side of the use of audiovisual aids involves all techniques and conditions which enable the audience to clearly perceive and understand the material. This side is often overlooked and/or underestimated by the users. This is made obvious by all those people, among them experienced educators, who want to illustrate their talks with transparencies but undermine their performance by messing up their sheets. Texts are out of focus, the lettering is unclear and/or too small, irrelevant paragraphs are not covered, sheets are not stocked in the right order, the presenter talks to the screen instead of to the audience, etc. Other mishaps can be observed in situations where instructors use pictures or charts to visualize the topic. Standing in front of the audience, they usually hold the picture in their hands while continuing their discourse. They are often not aware that a) the picture is not properly directed at the audience, b) the picture is continuously moving while they are talking, and c) the picture is too small for the people in the back to see it properly. Hence, nobody gets a clear view of the picture, which, apart from being a waste of energy, is also irritating and frustrating.

Since most audiences in rural areas are rather timid in these formal situations, they do not complain, and the instructor is not corrected in his mishandling of the material. Many more examples could be given which underscore the importance of the proper handling and use of educational materials. The point is clear: effective use of these materials requires proper skills, educational as well as practical ones on the part of the instructors. If they are lacking, it is better not to use the audiovisual aids at all because under these circumstances using them may do more harm than good. It is evident that in the distribution of audiovisual aids the proper training of their users forms a vital part. This aspect should receive due consideration in the planning and development of any of these materials.

Fealing at ease with radio
Photo: Roel Burgler

Familiarity

Another point which influences the choice and use of a particular medium is that of familiarity. In the chapter on communication it was argued that communication takes place more efficiently and effectively when the format and channel of communication are familiar to the receiver. Stories and jokes are well-known formats to people and people with an oral tradition are capable of memorizing detailed information even if they hear stories only once. The issue of familiarity also applies to media and educational materials. Radio is an excellent medium to convey information to rural audiences in developing countries with because the channel of communication is closely related to their oral tradition. Another good medium is that of interpersonal communication, because this is the way in which most information is exchanged in communities. Not surprisingly, around the world, rural audiences choose the extension officer as the preferred source of information on development matters.

Modern media are beyond their (traditional) experience, and therefore they create problems of interpretation, as we have seen in the cha ter on visual perception. When people are confronted with unfamiliar media .hey have to deal with two things: a) coming to terms with a new experience, and b) understanding that these media carry an (educational) message. To illustrate this I quote an experience of Gerbrands (1971) who did research on the Nausang mask of the Kilenge, West New Britain. He made a documentary film on the process of making and using such a mask. After editing the film in The Netherlands, he decided to go back to the Kilenge to show the result. His main reason for doing this was to use the film as an 'interview tool'. He expected that confronting the Kilenge with the material would trigger a lot of comments and information which he had not been able to obtain by way of ordinary interviews. The results proved him right but it took quite some effort to create the right 'feedback situation'. The Kilenge were not familiar with the medium and had, of course, never seen themselves on film. The first showings for the community at large were a major success. At first, the people were flabbergasted by this miracle of moving images, but soon they began to recognize the village and the 'actors'. This led to outbursts of hilarity and comments on 'funny' characteristics of the people in the film. Even after several showings the audience was still concentrating on the people and actions on the screen, and not on the topic of the film. Gerbrands realized that this was not the right atmosphere to conduct his feedback interviews. Hence, he changed his approach. He organized a number of viewings for a select group of people, i.e. those who were closely involved in the making and use of the Nausang mask. Eventually, he got this group to pay attention to the content of the documentary. And it paid off. Once they understood the content they came up with critical but valuable comments on the film and spontaneously provided a lot of additional information on this aspect of their culture.

The fact that the film reported about the audience itself focused their initial attention a great deal, but it nevertheless shows that the viewers had to get adjusted to the unfamiliar medium and had to discover that it actually did carry a 'message'. This is almost exactly what happened to Muldrow when she showed the Me'en a page from a children's book. They were puzzled by the texture of the paper and completely ignored the picture.

This may be a useful lesson for media developers who are planning communication strategies for rural audiences: unless the audience has gained proper understanding of an unfamiliar medium it cannot be effectively used for educational purposes.

Costs

In his book *Big Media, Little Media. Tools and technologies for instruction*, Schramm (1977) uses a classification of media based on economic criteria, and their production costs in particular. He distinguishes between Big Media which are the complex, expensive media like television, sound film, and computer-assisted instruction, and the Little Media, which are the simpler ones. The Little Media range from slides, slide films, and projected transparencies to radio and programmed texts. He claims that the unit cost of radio is in the neighbourhood of a fifth that of television and the decision to introduce television into a school system or a developing area is therefore of an order which is considerably different from the decision to introduce radio (1977:16). The Big Media involve huge capital investments and considerable numbers of highly trained technical personnel. According to figures from 1972, NHK Gakuen in Japan produced instructional programmes at US $ 1,937 for an hour of television and US $ 356 for an hour of radio. These figures may be much higher depending on the quality of the programme and on the local costs of personnel and services required to produce the programmes. In the same period the production costs of one hour of *Sesame Street* were calculated at US $ 42,000 and one hour instructional television of the British Open University cost US $ 20,000 (Schramm 1977:129 and 137). The quality standards of programmes are determined by production facilities on the one hand, and by quality requirements and communication objectives on the other. If the learning objective is that of conveying straightforward information which can be delivered by an announcer, then the production costs will be rather modest. If, however, the objectives are of a motivational or instructional nature which requires animation and special effects, then the costs will increase tremendously.

Although the production costs of Big Media may be many times those of Little Media, is does not imply that the unit cost of delivery is equally high. It all depends on the number of people who are reached by the medium and who receive the message. Bigger audiences reduce the unit cost of delivery per person. The importance of economies of scale in the cost structure of instructional radio and television becomes apparent in the table below. It compares the cost per hour per student for three projects.

Project	*N of students*	*Cost per student hour*
American Samoa	8,100	US $ 1.10
Hagerstown	20,900	US $ .20
El Salvador	48,000	US $ .14

(Schramm 1977:128)

In these projects, mainline teaching was done through television. The cost per student hour in American Samoa was high because the very expensive installation was prevented from expanding its services beyond the approximately 8,000 students in the Territory.

The production costs for the Little Media are substantially lower. A filmstrip of good quality can be produced for a few thousand dollars. Even a not too complicated video programme can be produced locally for the same amount. But, of course, the Little Media, except for radio, are restricted as to the audience they can reach. And, what is more, most Little Media require an instructor. The cost of the instructor need to be taken into account in the calculation of the cost of delivery of the Little Media. The costs include his salary (instruction, preparation and travel time) and the investments made in his training to use the media effectively. Consequently, the delivery cost of Little Media used by instructors will always be higher than that of programmes delivered to large audiences through radio, television and newspapers.

Choosing the right medium

Choosing the best medium for the educational purpose in mind may not always be feasible because of financial or logistic reasons, or because the conditions under which the medium has to be used are not favourable. It should also be remembered that in the development context few media are designed to be free-standing sources of information. Most media are developed and used as aids to educators, trainers and instructors to help them to increase the effectiveness of their educational activities. As such, they ought to be carefully adjusted to the teaching practice in which they are being employed.

There is a difference between the 'best', the 'most desirable' and the 'right' medium. The 'best' or 'most desirable' medium is the one that is most readily available and fits a given need in a given place at a given time (Schramm 1977:260). Choosing the 'right' medium is a process whereby the feasibility of certain desirable options is examined vis-a-vis the prevailing conditions regarding the production, distribution and utilization of the media. The right medium is the best possible option under the prevailing conditions. The process of selecting the right medium is a complex one and involves a careful examination of all aspects we have discussed in this and previous chapters. They are:

1. The topic of communication.
2. The learning objective.
3. The knowledge, experience and preferences of the audience (regarding topic, format and medium)
4. Level and format of the message.
5. The most appropriate communication channel.
6. Availability of production and reproduction facilities, resource persons and technical personnel.
7. Quality and coverage of the distribution system.
8. Availability of facilities at the receiver's end (e.g. equipment, electricity etc.)

9. Financial resources.
10. Technical knowledge of the users of teaching aids.
11. Experience in effective handling of teaching aids by users.
12. Daily routine and working conditions of users of teaching aids.
13. Cost-benefit analysis of various media under local conditions.

A serious analysis of all these aspects and conditions should be a compulsory exercise in any planning of communication/education programmes. Unfortunately, this seldom happens. Lack of time and resources are often quoted as the main reasons. This is only part of the story. All too often indolence makes material developers fall back on routine and the same old familiar medium. Or, alternatively, the latest technologies are uncritically embraced as the ultimate answer to effective communication and teaching.

Media and interpersonal communication

As we approach the end of this part of the book, it is important to reiterate a few points. The media have been discussed with regard to the role they play in rural development programmes. They perform educational tasks in support of broader communication objectives. Some of the media are meant to convey an educational message to the audience directly, while others are developed to facilitate the teaching process of the educator, trainer or field agent. Because of their different characteristics they perform best in combination, as this complements the educational potential of each and every medium. Combinations of media are successfully employed in various national campaigns.

In development programmes a combination of media always includes interpersonal communication. In the rural areas of developing countries media are no substitute for the benefits that are gained by interpersonal contact, no matter how well they have been produced. People need the help, guidance and encouragement that comes from relating to a teacher or extension worker. On the other hand, personal contacts and face-to-face interaction in themselves may not be sufficient to achieve effective communication either. The teacher and extension worker need models and media to help them to explain and illustrate the topic under discussion and, especially in the case of mass media-backing, to add credibility and authority to their words. Interpersonal communication is vital in motivating people to change their behaviour, but media are essential aids to explaining, informing and instructing people.

Part IV

Planning and evaluation

10.
Communication planning

In the commercial sector, product developers spend much time and money on exploring the market possibilities of new products, and comparable efforts are made by marketing and communication agents to define the characteristics of the prospective buyer segment, and the best communication strategies to promote and sell the product. Consumer research is part and parcel of the whole process and includes trial use of the product, identification of the profile of the target clientele, and pre-tests of pilot commercials and advertisements. The investments and financial risks involved in marketing new products are so high that thorough research is deemed necessary to minimize the risk of failures.

Even higher are the stakes in election campaigns where parties and candidates compete for political and economic power. Election campaigns are open markets where votes are bought and sold. The difference with the ordinary market is that it is not the customer who pays but the entrepreneur. In countries where democracy is based on feudal remnants, votes are literally bought for money. Individuals, families or clans give their votes to a party in exchange for cash, jobs and favours. People get immediate and concrete rewards for their votes without them being concerned too much about the political ideas of the candidate or party. In effect, the party/candidate buys his right to rule from the people.

In countries with more established democratic traditions, candidates spend campaign money on selling their political ideas to the electorate. These ideas consist of all sorts of ideologies and measures which may have direct or indirect influence on the lives of the people who cast their votes. People give their vote to the candidate who offers a package of ideas which suits them best and probably will bring them the best rewards in the near future. The rewards are implicit and for future delivery. In this context election campaigns are, to a large extent, intensive communication campaigns which are aimed at motivating the electorate to cast their votes on particular candidates/parties. More and more the communication aspect of election campaigns is emphasized and especially in the United States the role of communication specialists in the design and monitoring of campaign strategies and in coaching the candidates is eminent. They advise the candidate on matters of image, presentation, speech, outfit etc., to such extent that the style of communication and image of the candidate take precedence over the content of his political ideas.

What seems to be accepted practice in marketing, advertising and politics is still an exception in most communication activities in the field of education and extension. Audience research is a rare phenomenon and decisions on the message and the media are normally made on the basis of what educators/technical experts and media developers think is relevant and appropriate for people to learn and do. They are quite ignorant of what the prospective learners know, want, feel or how they actually live. This is rather unacceptable considering the interests at stake. Not only economic or political interests, but social interests as well. These interests determine the development, wellbeing and quality of life of many people and deserve the best professional communication approaches. A good case in point is the rapidly spreading HIV-virus. Awareness-raising, information delivery and motivation are key factors in the attempt to repel AIDS. The need for very effective communication campaigns that will teach people and influence their sexual behaviour seems obvious because society cannot afford a failure in the campaign against AIDS.

Proper planning and management are requirements for any communication initiative which is aimed to be successful. In this chapter, the main elements of the planning and management of communication for development are discussed.

Determining the topic of communication

Any communication event originates from a desire or need to communicate something to somebody. The desire is bound to be the prerogative of the sender, the need may originate from the sender or the receiver. The topic is either decided upon by the sender, suggested by the receiver, or agreed upon by both parties. In communication for development, the topics of education programmes and communication campaigns usually originate from one of three sources: a) directives by government and other agencies, b) suggestions from subject-matter specialists and field staff, and c) research findings.

Ministries design curricula for education and training and order campaigns to cope with undesirable situations and pressing problems. The latter may vary from public health campaigns (in case of sudden outbreaks of contagious diseases) to safer road conduct (No drinking while driving). International and national organizations press for campaigns in the sectors they represent, such as 'Health for all by the year 2000' and 'Education for All'. Educators and communication specialists are assigned/contracted to translate these directives into effective campaigns.

Other requests for campaigns or materials originate from within organizations with the aim to disseminate findings or facilitate training and extension.

Research departments may want to spread the news of their latest findings to interested colleagues, or may want to disseminate information on the practical implications of their research to extension officers, trainers and/or end-users. Trainers may be in need of audiovisual materials to illustrate their lectures with, and field staff may express the need for communication support to facilitate their work. This can vary from simple illustrations which they can take around, to radio and television programmes. In these cases, the communication specialists work together with the originators of the requests to develop the materials that will meet their requirements.

Another source of communication topics is participatory research. Through participatory research the needs and problems are established as they are perceived by people in their everyday life. An analysis of these needs and problems serves as the basis of a development plan which includes the appropriate educational/training strategies and communication approach. The role of the communication specialist varies according to the degree of participation by the people. In some cases, the people themselves decide on the communication.

Determining the target audience

The basic question in determining the target audience is: whom should we reach with our message? In some cases, the target audience is fixed from the start, i.e. when a community is selected for a development project, or a particular group of people is singled out, e.g. when a minority is encouraged to learn the national language. Sometimes, the topic of communication defines the target audience. A campaign to warn against the dangerous combination of alcohol and driving obviously is targeted at all road users who drive motorized vehicles. The prime target group of a campaign to propagate breast-feeding is that of pregnant women.

In other cases, the target group can only be determined after some initial research. If a communication campaign is set up to propagate child spacing, we have to establish who is in need of what sort of information and/or encouragement. And we have to know who within the family carries authority in these matters. In most societies, women easily accept the idea of child spacing and are motivated to take precautionary measures, but they are not the ones who can decide on the use of contraceptives. The opinion of the husband is a determining factor and also the parents exert influence. For child spacing campaigns to be effective, the social environment of women needs to be convinced which means that husbands and other important members of the social network have to be seen as target groups also. However, the various people may need different information and different approaches in order to be convinced. This calls for specific communication campaigns for each and every category of people.

Baseline surveys and communication objectives

After one determines the target audience, information has to be gathered on the characteristics of the people, how they live, what they know about the topic, what their problems and needs are, etc. This information is needed because the campaign should take the existing situation in which people live as its point of departure, build onto what people know, and take into account what people find important and what they aspire. On the basis of this information, the communication planner is in a better position to define the (learning) objectives of the communication activities. Is it enough to provide the people with information, do they need to be stimulated to reflect on their situation, do they need instruction on particular actions or skills, or do they need to be assisted in implementing their activities?

Communication planning has to be based on research and empirical data. Basics for planning are: a) a baseline survey among the intended audience; b) pre-planning studies which focus on a series of inspection and observation trips to gather additional data on the study areas and to take an inventory of existing resources and facilities for carrying out the communication activities; and c) a review of existing documents and research reports on past activities and campaigns.

A baseline survey would have the following objectives:

1. to determine the profile of the intended audiences in terms of their demographic characteristics and socio-cultural values and orientations;
2. to determine their initial levels of knowledge, attitudes and practices (KAP) toward the general and specific messages of the planned campaign/communication activity;
3. to determine their levels of exposure to various types of mass media, as well as interpersonal media, such as extension workers, health workers, etc.
4. to determine their preferences in terms of mass media as well as interpersonal media for the dissemination of messages; and
5. to help estimate their receptiveness and willingness to participate in campaign activities.

(ASEAN 1981:3)

Demographic characteristics may include age, gender, civil status, religion, ethnic identification (where applicable), language/dialect spoken, educational attainment, income, and membership in community organizations.

In the case of a population campaign, socio-cultural values and orientations include attitudes and opinions regarding traditionally-held beliefs and the social, moral and religious implications of family planning practice on kinship ties, family solidarity, sex and other matters.

Attitudinal questions may be asked regarding family planning practice, the use of particular methods, perceived advantages or disadvantages of specific health practices, etc. Questions on behaviour may include past and present use of family-planning methods, frequency of carrying out specific health and sanitation practices, intention to practice such in the future and others (ASEAN 1981:4).

Specification of the communication activity

The next step is determining the specific contents, approach, level and format of the message. The surveys have revealed the knowledge, attitudes and practices of the audience related to the topic, and the objective has been defined. The knowledge and experience of the audience determines the level of the message, e.g. introductory or more advanced. The learning objective and communication preference of the audience will help to define the most suitable format of the message: story, interviews, discussion, drama, instruction etc.

Inventory of infrastructure and communication resources

In this phase the leading question is: what human, technical and material resources are available for the development and implementation of the intended communication campaign? The inventory is aimed to identify:

- subject-matter specialists who can take care of the contents of the communication;
- educationists and communication specialists to design the medium of communication;
- technical personnel to produce and broadcast the materials and messages;
- facilities and supplies for the production of materials;
- networks and infrastructures for distribution;
- field personnel who will use and/or complement the materials/ communication (quality and quantity).

Development communication is a field of activity that is a mixture of disciplines: it is part science, in that it draws heavily on social and behavioural sciences, psychology, and diffusion theory; it is part art, in that it draws on the talents and skills in media production; and it is part craft in that it uses a wide variety of aids and technical equipment (FAO 1989:11). Because development communication cuts across different sorts of expertise and facilities, these are hardly to be found in one organizational location. Ministries of Information certainly have the media infrastructures and communication expertise but they may not have the subject matter specialists and/or educational expertise. The opposite may apply to the Ministries of Education or

Agriculture. The inventory therefore should indicate the options and conditions for collaborative arrangements between these various organizations in developing and implementing the intended communication activity.

In the less developed countries, skilled technical personnel especially are in short supply. Qualified and experienced media developers and producers are scarce. This is partly due to the fact that communication does not receive the recognition it deserves. In developing countries there are very few training institutions where people are trained in the skills of media production. Those who find employment in this field receive on-the-job training, or are sent abroad for training courses. The salaries paid to media personnel reflect the meagre appreciation of the role of communication. Especially visual artists are underpaid. If one looks for example at the salary structure of an average Ministry in Africa, visual artists are ranked just above the cleaners and office attendants, and are paid at the same level as the regular office clerks.

The technical environment is equally important. Laboratory processes are required for the production of slides and films. If these cannot be carried out in the country itself then the production of these media becomes rather difficult. Broadcasting signals may be so weak that radio and television cannot reach the remoter parts of the country. These factors needs to be weighed carefully in the balance of a communication plan.

Selecting the appropriate communication support and media

What is the most appropriate communication support and what are the right media for conveying the specific message to the audience, considering the local circumstances? As was discussed in the previous chapter on 'choosing the right medium', much depends on the characteristics and preferences of the audience, the available production resources and the conditions under which the communication activities are to take place. A careful analysis of these aspects and conditions will help one determine the most appropriate approach and materials.

Development of communication support and materials

Once the research and analysis have been finalized, the development of the communication strategies and the production of the materials can begin. Planning, in this stage, consists of drafting timetables for the various activities involved in the development and production process, and determining the tasks and responsibilities of all production personnel, and organizing arrangements of collaboration between various contributing organizations.

During the implementation, the most important tasks are the coordination of the production activities and the timely delivery of supplies and services. The quality of the work needs to be checked and the progress of the production process monitored.

Pre-testing of the proto-type

Materials should always be produced in a 'draft' form and tested with small groups of people who are representative of the target audience for which the material is produced. This pre-testing is necessary to identify weaknesses or errors in the language or visual images used in the materials. Pre-tests reveal misinterpretations of visual messages, misunderstandings of oral messages, lack of understanding or retention of information due to speed of presentation, complexity of the message, or the structure of the contents. Pre-tests also reveal problems which instructors/field staff will encounter in the use of the materials.

Pre-testing is a crucial step in the production process because it enables one to spot and remove deficiencies that affect the effectiveness of the material, and it helps prevent a loss of goodwill and a waste of precious financial resources. The process of pre-testing is discussed in the following chapter.

Production of the instructor's brochure

Ideally, every teaching aid should be accompanied by an instructor's brochure that will instruct the user on the efficient use of the material. The brochure should include the following:

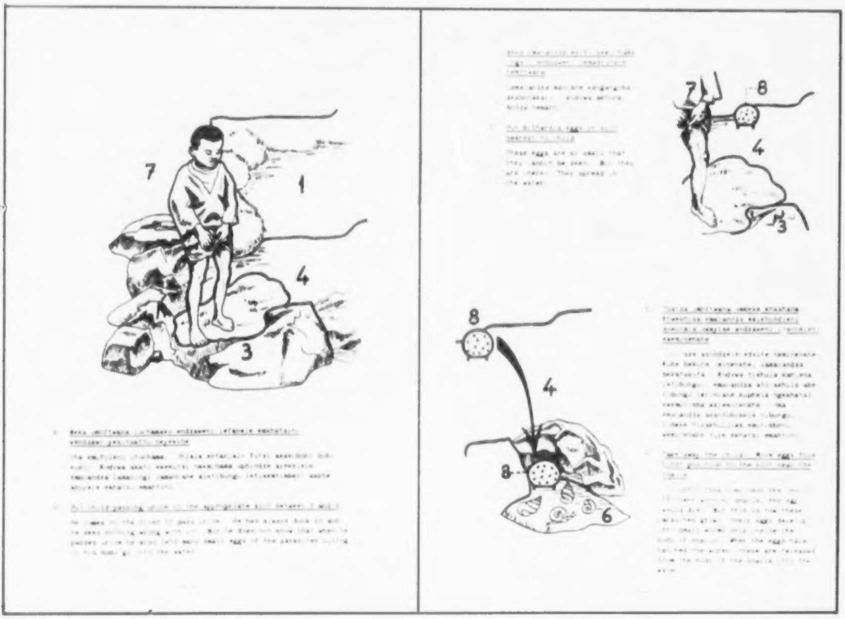
Instructions on - the operation of audiovisual equipment (if applicable; e.g. slide projector, cassette recorder).
Advice on - best teaching situation (e.g. positioning of the materials and maximum audience size);
- stimulating audience participation;
- discussion techniques;
- improvisation during the use of teaching aids.
Information on - subject matter covered by the teaching aid.
Text of - the commentary or drama (in the case of media such as cassette programmes, films or videos).
List of - sample questions to initiate a discussion.

Training of field agents and instructors

A survey among prospective users of the teaching aids should provide insight into the following aspects:

- amount of knowledge they have on the topic dealt with in the teaching aid;
- level of interest in the subject;
- their knowledge of the target audience;
- their communication skills;
- their practical experience in using teaching aids;

The outcomes of this survey will determine the need for and contents of the training activities. The training on communication skills and handling of the teaching aids needs to be practical in orientation. The best pedagogical format for these training sessions is that of role-play, through which the trainees develop skills in a pseudo realistic situation with immediate feedback on their performance.



Pages from an instructor's brochure, PBFL/Swaziland

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Mass production and dissemination

Planning for mass production and dissemination is determined by the estimated exposure that is needed to reach the target audience with the message. The planning will vary per medium because of different channels of delivery. The planning of radio campaigns will have to concentrate on the time of broadcasting, the frequency of broadcasting (time between broadcast programmes), scheduling of repeater broadcasts etc. In case of a poster campaign, the number of posters to be printed and distributed corresponds with the estimated number of public outlets which qualify for display of the material (e.g. schools, clinics, bus stations, supermarkets). The number of leaflets is determined by the estimated number of people attending community meetings, educational gatherings or training sessions. The number of teaching aids such as flip charts, flannelgraphs and cassette programmes depends on the number of teachers, instructors and trainers that are expected to use these materials in classrooms, at extension meetings or other functions.

In planning the dissemination strategies, planners have to accommodate to the realities of local circumstances. A producer of agricultural radio programmes would like his programmes to be aired at times when the farming community is in the position and in the mood to listen, i.e. the early hours of the evening. Those are the peak hours of daily broadcasts and all producers try to slot their programmes in at that time of day. It is the time when companies want their advertisements to be heard and they prefer their products to be associated with entertainment programmes rather than with a dull agricultural lecture. In very few countries, educational programmes aimed at adults are allocated the times that would suit the audience best.

In many countries, the postal service is unreliable and transportation difficult. Under these circumstances, it may be a problem to get the materials (e.g. posters or leaflets) to the earmarked outlets in the country. The planning and implementation of the distribution will require a lot of creativity. Sometimes, for instance, it is lucrative to strike a deal with beer companies for the distribution of materials because beer travels to all corners of almost any country.

Ongoing monitoring and evaluation

During the implementation of the communication campaign/activity, there is a need for continuous monitoring and evaluation. The efficiency of the distribution system has to be monitored and controlled. It may be that the communication activities are not having the desired effect, and misunderstandings arise. If that is the case, message design and materials need to be revised according to the needs that are revealed by ongoing monitoring and evaluation. If necessary, this has to be repeated, until the approach and materials are generally appreciated and understood.

In the next chapter we will discuss the importance and procedures of pre-testing, monitoring and evaluation in greater detail.

11.

Pre-testing, monitoring and evaluation

In any communication event, big or small, applied research plays an important role. Even in everyday personal communication we conduct research, often unknowingly, which resembles that of professionals in their planning and management of communication campaigns. Take for example the situation in which a boy has developed feelings of love for a classmate. The classic problem of 'how to tell' the girl arises. Frankly speaking, he hardly knows her: he is rather ignorant of what girls think in general, and he is at a loss regarding the specific feelings and ideas of this girl in particular. The boy decides he needs to collect more information and establish closer contact with the girl before taking any further steps. In an inconspicuous way, he gathers information on the character and habits of the girl by talking to mutual friends and acquaintances, and by observing her in social activities. At a certain moment he decides it is time for 'action'. But how? He analyzes and compares the strategic options, taking into consideration his own strong points and what he knows of her. He has the option to invite her for an evening out or ask her to a dance in the disco, putting trust in his entertaining qualities and verbal strength. He can write her a letter or poem trying to appeal to her romantic feelings and impress her with his picturesque language. He can try to engage a good friend to act as go-between to establish contact and exchange information and reactions. Or, ... well, there are so many options to choose from in the planning stage.

Comes the day when the implementation of the crucial step in the strategy has to be carried out. This is the phase where monitoring and evaluation become important. Suppose our hero has opted for an evening out. He has probably spent many a sleepless night on the planning of the date, worrying about all sorts of details that may be of the utmost importance: what clothes to wear on the occasion, what sort of transportation to take, where to go, how to programme the evening, what topics of conversation to raise, etc. All these aspects may be important for him to please the girl and to get her into a favourable mood. During the implementation of the 'programme', the boy will make sure that the plans are carried out according to schedule and he will constantly monitor the effects on the girl, i.e. does she seems at ease and happy? In a way, he continuously assesses the effectiveness of his 'project', i.e. his 'invasion' in the life of the girl. Depending on her reactions and responses, the boy may be forced to change his programme or approach in order not to spoil the evening which should be nothing less than 'wonderful' in the opinion of the girl.

The next day he may look back on the evening and reflect on the successfulness of his strategy and approach. Has everything worked according to plan? If not, what were the reasons and how could it have been avoided? What did he learn from the experience?

At a later date, the effect or impact of the 'project' can be established: did it lead to the development of a romantic relationship, as was the initial driving force and goal behind the initiatives of the boy?

It appears that in situations where people stand to lose or gain a lot emotionally, financially or otherwise, people are fully aware of the importance of effective communication and they go to great extremes in carefully planning, implementing and monitoring their communication activities. In their drive to be successful, their efforts are totally receiver-oriented because they want to avoid being misunderstood or not appreciated. But, as soon as the stakes are not that high, or are less personal, people tend to become very casual about the way they communicate and less concerned about its effectiveness. They fall back on a sender orientation and, if misunderstandings occur, are quick to blame others for not getting the message.

Unfortunately, in communication for rural development the latter attitude is quite common. Although the stakes are high, i.e. the development of the country and the quality of life of the people, the communicators/educators are rarely deeply involved in a personal way. Unlike in the commercial sector, the jobs of civil servants are not at risk when they fail to communicate effectively.

In the previous chapter, we discussed the importance of baseline surveys and needs assessment for establishing the knowledge, attitudes and practices of the intended target audience. And we touched upon the pre-testing of materials to assess their understandability and acceptability. These two research activities are important aspects of the planning process because they may ensure the relevance of the communication objectives and the effectiveness of the communication methods and techniques.

In this chapter we will discuss the process of pre-testing in more detail and we will look at the role of monitoring and evaluation during the implementation of the communication activity.

Pre-testing

Pre-testing (also called pilot testing) means testing the communication materials and teaching aids under field conditions with samples of the target audience. This pre-testing takes place before the materials are mass-produced or transmitted. By interviewing the audience it becomes clear whether the materials are understood, i.e. if the message or idea is conveyed in the way it was intended, and whether the audience likes the materials and accepts the message.

The following aspects are assessed in a pre-test:

- audience identification
- comprehension
- message transmittal
- acceptability (non-offensiveness)
- attractiveness, construction, clarity of visuals or sound, colour, size, sequencing, accuracy
- connection of visuals with text or audio

(Raab 1987:72)

Phrased differently, pre-testing provides the designer of the material with answers to the following questions:

- Do they like the material?
- Are they used to abstraction of ideas, or do they mostly think in concrete terms?
- Do they understand symbols?
- Do they get the message right away, or are they confused by the way things are portrayed, or by unnecessary details?
- Are they familiar with pictures in a series - do they connect the pictures in e.g. a flip chart with each other, or do they interpret each picture separately?
- Do they see how the picture or situation portrayed is relevant to their own lives and their own needs?
- Does any part of the picture embarrass people?
- How much experience do they have in being taught with pictures? Based on this, what can they realistically be expected to understand?
- What significance is attached to the different colours?

(Haaland 1984:9)

With the answers to these questions, the content and presentation of the aids can be adjusted and improved as deemed necessary. If pre-testing does not take place, a lot of money, time and resources may be wasted. The expense of the pre-testing is very small compared to the cost of a ten thousand copy failure. Another consequence of omitting pre-testing is that the audience do not get the opportunity to share ideas that could help them improve their lives. Possibly even negative ideas and messages may be communicated by the materials.

Despite the obvious social and economic interests involved, pre-testing is still widely ignored in development communication. Haaland (1984:13-14) sums up some of the more prominent reasons :

- There is the attitude that 'We know what they need and understand', a tacit premise that underlies many development assumptions. Even if developers with this attitude do go and pre-test communication materials, it is more often to test the villagers than to test the materials (i.e. if the villager does not interpret correctly, the villager is at fault).
- The most common excuse for not pre-testing is 'lack of time and money'.
- The bosses will find fault with the developer for not meeting the deadline. They will not, however, criticize him for not pre-testing. Most people prefer to play it safe and produce the materials fast to please their bosses.
- The concept itself may be alien to people where the education system is dominated by the lecture method rather than the participation method and the principle of starting where the learner is.
- Artists and planners may feel that if villagers do not understand their drawings or materials, the villagers are criticizing their work, and they will not accept criticism from anybody below them.
- The Asian cultural norms against open criticism of other people's work, especially of elders or one's superiors can be another factor preventing pre-testing. People in rural areas often are not used to this kind of interview either, and they may not know how to respond at first, especially if the interviewer is in a hurry.

These attitudes of artists and communication planners need some correction in order for pre-testing to become an integral part of the production process. Maybe they should be convinced of the fact that pre-testing need not be all that cumbersome and time-consuming. Pre-tests are usually fairly small-scale surveys. My own experience in pre-testing visual materials with rural people taught me that a survey population of about 20 people may suffice because the perceptions and attitudes of the target population are usually very consistent and show little variance. If, for example, test person no.1 strongly reacts to something depicted in a drawing one can be sure that 8 out of 10 people of the sample population will come up with the same reaction. Not because they influence each other - the tests are taken individually - but because they share the same ideas and/or feelings. This is especially the case with values and strongly-held beliefs.

The average pre-test can be conducted in less than a day, so it is not time-consuming. It is also not cumbersome because the research questions are really quite simple. Apart from a few personal data, the researcher is interested in three important things: a) understandability/comprehension; b) acceptance, and c) appreciation/attraction. Simple, open questions are sufficient to obtain the required information with, such as: please, describe what you see in the drawing; are there things in the drawing that you like (dislike); is there anything you think is not correct (or you disagree with)?

Pretesting a leaflet
Photo: Ad Boeren

Probing (follow-up questions) may be needed to get satisfactory response from the interviewee. We quote an example of probing from Haaland (1984:27-28). The object of pre-testing is a picture of a child lifting a pair of weights, encircled by different kinds of foods that will make him strong. An acceptable interpretation of this picture could be e.g. 'If your child eats rice, vegetables, potatoes, sweets and fruit-juice, he will be strong'. The interview goes as follows (interviewer = I; respondent = R):

I: What do you see in this picture?
R: (hesitates) .. I don't quite know. I see a child; I think.
I: That is fine. How is the child?
R: He looks very fat. He is smiling.
I: OK. Do you see anything else?
R: There is a bottle ...
I: What is in the bottle?
R: I don't know. Water, maybe.

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I: OK. Anything else?
R: Those round things … are they eggs or potatoes?
I: Well, what do they look like to you?
R: I think they could be eggs.
I: Fine. Do you see anything else?
R: There are some bricks, and some small black spots.
I: What do you think the black spots could be?
R: I don't know. Stones, maybe. What are they?
I: Well, I don't know either. Just tell me what they look like to you.
R: I think they are stones.
I: OK. Anything else?
R: Yes, there is a plate of rice. And some corn.
I: That is fine. Now, looking at all these parts together, what does the picture mean to you?
R: It is a child with some food around it. The child is too small to lift those kind of weights. Why are they put there?
I: I don't know. Maybe the artist was trying to show something.
R: Well, I don't know what he is trying to show. I can see those vegetables and eggs and rice, and a child lifting weights. What else is there to see? Everybody knows that children don't lift such weights.
I: Yes, that is probably right. Now, let us go on to the next picture …

Good probing is difficult in the beginning. The interviewer should 'forget' his knowledge and experience, and be solely interested to know the ideas of the respondent. Good probing will come with experience.

What artists and communication planners also should be made aware of is the fact that pre-testing is an extremely rich learning experience. If they are willing to accept this learning experience, they will find that after some time they will be able to come up with materials that are receiver-oriented, and that reflect the perceptions and preferences of the target audience. It is therefore important that, if possible, the artists and communication developers themselves conduct the pre-testing surveys. It gives them the opportunity to get to know their target audience and it provides first-hand feedback on their own products. Although there is the risk of a certain bias entering into a given interview because very few people like to be criticized openly, the positive benefits of using production staff to conduct field evaluations would seem to outweigh any negative consequences by far (FAO 1990:17).

Materials should be pre-tested at two levels: a) that of the content and presentation of the material, and b) that of the utilization of the material. A flip chart is pre-tested chart by chart with individual respondents to check on interpretation and appreciation, and it should be pre-tested while being used by an instructor during group meetings. In the latter form of pre-testing it is important that the material is presented to the test group in a manner which resembles as closely as possible the way in which it is intended to be used. This exercise will reveal whether the material is easy to handle for the instructor, whether the visual materials are big and clear enough for easy viewing by the members of the group, whether the story has the ability to capture and retain the attention of the audience, etc.

Process evaluation

Evaluation could be defined as a process through which one attempts to determine as systematically and objectively as possible the relevance, effectiveness and impact of activities in the light of their objectives, i.e. their aims and purposes (Raab et al. 1987:4).

Evaluation that studies the efficiency and effectiveness of the implementation is called process evaluation, or monitoring. Some call it 'formative' evaluation. It is aimed at identifying any weaknesses and strengths in the implementation process in order to maximize efficiency and to make optimal use of available resources and facilities. Usually descriptive in nature, process evaluation includes observation of the general reactions of members of the intended audience to specific communication activities as well as to the multimedia mixes and materials employed (ASEAN 1981:23).

Process evaluation examines such contributing factors as:

- change in trainee/receiver knowledge, skill, or attitude;
- effectiveness of communication/training methods and materials;
- interpersonal relationships among staff;
- performance of instructors in a communication/training situation;
- communication channels;
- logistics;
- extent to which people involved in, and affected by the training activity are in agreement with its intent;
- adequacy of the resources, the physical facilities, staff, and the time schedule.

(Raab 1987:82-83)

In process evaluation both formal and informal methods are commonly used. Formal methods include knowledge, skill and attitude tests to enable one to compare the changes before and during the implementation of the activity, and instruments that solicit the opinion of respondents/trainees, instructors and other staff on various aspects of the activity. Informal methods include roundtable discussions and individual interviews (Raab 1987:83).

Oakley (1985:117-18) suggests the following instruments for the evaluation of extension activities at village level:

- *agent's reports*
  The agent should take some notes on each activity for his own use, concentrating on his conduct of the activity and on points to note for future occasions.
- *supervisors*
  It is not easy for an agent to assess how well he conducts an extension activity; particularly so because he cannot see himself through the eyes of the farmers who attend. It is useful, therefore, to have constructive comments from a supervisor or colleague.
- *discussions*
  Informal discussions with farmers after the extension activity will reveal their immediate reactions. It is often useful to record such discussions using a tape recorder for later transcription and fuller analysis.
- *questionnaires*
  Simple check-lists and questionnaires can be used when the agent has the time and opportunity to carry out a more formal evaluation of extension activities. Before carrying out a demonstration on early planting, for example, the agent could prepare a list of four or five important facts that farmers should know after they have attended. By asking a sample of farmers questions on these facts, before and after the demonstration, the agent can assess the impact on the knowledge of the farmers.
- *observation*
  Where changes in farming practice are concerned, observation is an accurate source of information. The agent can see whether or not his advice is being adopted at farms in the area.

The results of the process evaluation can immediately benefit current activities. The feedback may be used to remedy certain observed mistakes, to improve the content of the message, and to enhance the methods and instruments of communication/instruction.

Final evaluation

Final evaluation, also called 'summative' evaluation, is used to determine the effectiveness of a training/communication activity after it has been completed. In training situations it is a method for collecting information on the trainee and training activity achievement (Raab 1987:112). While results from process evaluation may be used immediately to benefit the current activity, results from a terminal evaluation are used to assess the effects of the activity and to improve future communication/training activities. The tools and procedures for collecting information are similar for both process and terminal evaluation (ibid.:82).

Two general methods are used in terminal evaluation:

- actual measurement of change in trainee knowledge, skills and attitudes, or of competence, and
- measurement of trainee perceptions about the training activity (ibid.:114).

The measurements may be taken in the form of written tests or interviews, assessing the trainees knowledge, skills, and attitudes. In these tests, the respondents may be asked to fill in blanks, to answer multiple choice options, to write essays, to give their opinion about certain statements etc.

Impact evaluation

An impact evaluation assesses the results of the activity in the light of the original overall objective of the project or programme. In the context of an in-service training programme, it would assess changes in on-the-job behaviour (i.e. improved performance) as a result of the training efforts. It would also attempt to get additional feedback from the trainees, and their supervisors, on how appropriate this new behaviour is in the workplace (Raab 1987:136).

In communication campaigns, impact evaluation would focus on the effects of the communication activities on Knowledge, Attitudes and Practices (KAP) levels and rural development indicators. Relying primarily on questionnaires, the data obtained from impact evaluations are generally quantitative (ASEAN 1981:23).

Impact evaluations require a before-and-after comparison of the KAP levels of the intended audience in relation to the information or behaviour advocated by the campaign. Observed and/or articulated changes in attitudes or behaviour related to such rural development activities as food production, saving, planning, the use of leisure time and other practices that may be attributed to the intended audiences' exposure to the campaign also comprise direct measures of campaign effectiveness (ASEAN 1981:24).

Impact evaluation is the most difficult and expensive type of evaluation to carry out. The central problem in impact evaluation is to establish the contribution of external factors to the results of the communication/training activity. Audiences and trainees do not live in a vacuum. They are part of social and economic systems, they receive information from a multitude of sources, they have limited freedom of choice, have to set priorities and balance resources. All these factors have an influence on people's decisions, attitudes and behaviour.

One way of establishing the possible effects of external factors is by involving control groups. These control groups are similar to the target group with regard to socioeconomic and cultural characteristics and living conditions. Or, in the context of training: they have the same job, work experience and educational background. By not exposing the control groups to the campaign/training which the target group receives, it should become possible to establish the effects of the communication/training intervention with more confidence and greater reliability.

Although the results of impact evaluations can never be presented with 100% certainty, because in real life processes and factors can never be fully controlled, the need for impact evaluations is evident. It is the only instrument with which one can answer the ultimate question: has the project/programme achieved what it set out to achieve? For commissioners of projects and programmes this is the most important question they want to see answered. They want to know the results in order to be able to determine whether the investment of time and resources has been worthwhile.

Concluding remarks

It will be evident that evaluations aimed at assessing changes in knowledge, attitudes or practices - be it process, terminal or impact evaluations - need to be carefully planned and properly budgeted for at the beginning of the project or programme. All these evaluations require pre- and post-intervention surveys/tests for one to be able to assess the changes that occur as a result of the activities undertaken. One cannot decide to have an impact evaluation halfway or even after conclusion of the project because the opportunity of assessing the initial situation has been missed. Unfortunately, many donors of development projects only think of impact evaluations when the project is drawing to an end. Most evaluations which are commissioned are process evaluations carried out to check on the efficiency and effectiveness of project implementation.

Development communication would gain a lot if all parties involved, from policy-makers and donors to communication planners and field staff, were to acknowledge the fact that evaluation is an integral part of the communication/education process and that the one cannot be adequately carried out without the other.

Epilogue

Development consists of three equally important elements: the economic, the social and the human element. People need economic opportunities as well as a range of social services (i.e. health, education, welfare) which ensure that the non-productive needs of a society are taken care of. The human element of development regards the development of the people themselves, both individually and communally, towards realizing their full potential, using their skills and talents, and playing a constructive part in shaping their own society. Education, extension and training are the channels used for nurturing this potential. The development of people involves learning, discussing, practising and evaluating, a continuous process of formulating, interpreting and applying ideas. It involves interaction between the teacher and the pupil, between the extension officer and the farmer, between learners themselves, between rural people and service organisations.

Communication plays a fundamental role in development because it enables people to exchange ideas, it facilitates interaction and makes the transfer of information and knowledge possible. As the mode of expression, and in its role as the vehicle and perpetuator of culture, communication is subjected to the conventions and rules adhered to by the group of people who share a particular culture. The influence of culture is quite pervasive, it determines the world view, language, value systems, norms, role behaviour of the members of the group. It moulds people's perceptions of the surrounding world and dictates the way signs are interpreted.

Communication between people belonging to different cultures is problematic because of the influence of culture on the way people think, act and express themselves. Cultural differences do not just exist between people of different nations but are even eminent between people belonging to the same tribe or community. Every individual is part of various groups in society, the membership of which is determined by gender, profession, education, age or other characteristics. Each of these groups will have its own peculiarities which makes it culturally distinct from other groups.

Communication for development is bound to entail communication between people of different backgrounds. It is about sharing ideas between experts and beneficiaries, in which the experts may consist of subject-matter specialists, teachers, development workers, local leaders and knowledgeable community members. They come into contact at the initiative of one, or both parties. In the case of underprivileged communities, most developmental activities are initiated from the outside. Even in truly participatory projects the initial idea was injected into the community by an outside source, either a development worker, a radio programme or a returning community member.

This book has paid little attention to the more privileged sections of the rural population in developing countries, the ones with access to land, resources and information. These people are visited regularly by development workers because they are receptive to new information and advice and because they can afford to take risks. It is not the category which needs assistance most. Even without extension services they would probably seek the information they need.

The rural masses form the biggest challenge for development agencies as they are least privileged in terms of resources and accessibility to services and new ideas. The gaps in knowledge and the differences in culture between them and the development worker are considerable. Any attempt to establish a productive relationship will require long-term commitment and patience. Gaps and differences of the same nature are pertinent to the development messages that are directed at the underprivileged via the mass media. This is one of the reasons why mass media are quite ineffective in reaching the rural poor with educational messages. Mass media cannot establish personal relationships or dialogues with people, mass media cannot listen.

As was pointed out in one of the chapters, the development communicator is usually ill-prepared for the job he is supposed to carry out. Extension workers especially suffer from an inadequate and often one-sided training which focuses on technical know-how and falls short in subjects that would facilitate the social and educational aspects of their work. If one is serious about improving the performance of the extension force and other development workers, a critical look at their pre- and in-service training seems necessary. To strengthen the professional background of extension agents and increase the potential of success with the rural people the curricula of the colleges and training programmes should be enriched with modules on indigenous knowledge systems, adult education, participatory approaches to development, rural sociology, extension methodologies, interpersonal communication, utilization of communication media, and the like. Such a training would hopefully give the extension worker a better understanding of the people's know-how, beliefs and practices, and provide him with the perspectives and skills for better communication with the people.

Ideally, the development worker should act as an information broker and a catalyst, providing the knowledge and information which people need to choose their own road to development. Development should ultimately be the responsibility of the people themselves, who are assisted in their plans by outside sources if and when necessary.

In this book, the importance of the so-called mass media for rural development has to a certain extent been belittled. This was done for three reasons. Firstly, in many developing countries - especially the poorer ones - the mass media do not cater for the masses but only reach a small percentage of the population. The rural masses have limited or no access to television, film and newspapers. Of the mass media the radio still has the furthest reach. Secondly, learning from mass media requires familiarity with the formats and codes that characterize these media. Newspapers require literacy, film and television require certain levels of 'visual literacy'. Most rural people lack enough exposure to the media to be able to acquire these 'literacy' skills. Radio is an exception because it uses verbal language to convey messages. This quality makes radio a medium that can be used for direct communication to the rural masses, provided it broadcasts in the local language. Thirdly, mass media are one-way channels of communication which limits their educational potential. Mass media are very useful for informing and instructing but are not equipped to change strongly-held beliefs, values or habits. In rural development the motivational part, i.e. making people think about their way of life and problems and stimulating them to formulate solutions and develop some action is the lion's share of the work.

Interpersonal communication has always been the best way of raising issues that are of fundamental importance to people. Development practice of the last decades has demonstrated that most aspects of life, even the apparently simple ones, are embedded in a network of sensitive cultural issues. In one of the chapters the example of pit latrines was given. People refused to use the latrines because the concept clashed with local beliefs on witchcraft, on the origin of diseases and with traditional customs.

Interpersonal communication enables people to discuss issues like this on an equal footing, it creates possibilities for direct feedback to measure the effect and impact of the communication, and it makes adaptation of the content and style of communication possible if and when this is required. Whether the discussion takes place on an equal footing very much depends on the attitudes of the experts and beneficiaries towards each other.

Along with the importance of interpersonal communication in rural development the usefulness of the smaller media has been highlighted. Smaller media are used to facilitate the work of the development communicator, to stimulate communication between the beneficiaries themselves, and to make communication between the communities and the agencies/policy-makers possible.

All media have educational potential but they cannot be used at random for each and every objective, audience or topic. They have their own specific characteristics, their strong and weak points. Ideally, the media choice should be based on a careful analysis of the objectives and conditions of a particular communication event. The analysis should make clear which media can be expected to perform well in this particular case, and should also suggest which combination of complementary media would be most successful. There is no doubt that multi-media approaches are more effective than singular media approaches.

However, ideal conditions are hard to find in developing countries. Decisions on media selection are frequently made on what is possible, instead of what is desirable. Critical factors in the selection are such practical issues as the quality of the dissemination infrastructure, the capacity of the production facilities, the familiarity of the audience with certain media, the experience which development workers have with the utilization of audiovisual materials, and the availability of financial resources.

Again ideally, good extension or information campaigns would start with baseline surveys and needs assessments to establish the knowledge, attitudes and practices of the intended target audience. And the development process of the materials would include pre-testing to assess their understandability and acceptability. These two research activities are important aspects of the planning process because they ensure the relevance of the communication objectives and the effectiveness of the communication methods and techniques.

If the development communicator were able to avoid all the communication barriers, display the right attitudes and use the media correctly would this solve the development problems in the world? Unfortunately, the answer is no, but the results of the development programmes would no doubt improve. As was said earlier, communication is fundamental to development, but it is by no means an independent variable which, if used 'correctly', can set in motion the engines of development.

It is always important to keep in mind what communication, realistically speaking, can achieve. Quite frequently the success of communication campaigns is defined in terms of change of behaviour. It is apparently not enough when people show an interest and leave it at that. They need to make up their minds and undertake steps to display new behaviour. But what if conditions prevent people from implementing their plans? Local or personal circumstances may prevent people from changing their behaviour, even though they seriously intend to do so. This happens, for example, when people are encouraged to use condoms to prevent the spreading of AIDS, but local clinics, drug stores or other outlets have no condoms in stock. Can we blame the communication process for these failures? It seems rather unfair to me.

If we want to be realistic about what can be expected of communication it is important to realize that communication is only a means to an end. It is a social process that facilitates human interaction, not a magic wand that delivers instant development. It would be fair to assess the effectiveness of communication on its intrinsic capacities, not on its ascribed potential. In this context it may be useful to make a distinction between effective communication and successful development activities. I would argue that communication may be effective even though the 'project' in which communication serves as an instrument fails to achieve a certain aim. This is the case when the circumstances prevent the realization of good intentions. I regard communication for development as effective when people make up their mind and show a willingness to change. When they intend to behave in a new way. The 'project' becomes a success when conditions are favourable and people actually display this new behaviour. Or, to go back to the example: when people are motivated to use condoms, can obtain them from a convenient place, and actually use them as prescribed.

Dictionary of concepts

- *Basic Needs Approach*

In the 1970s development came to be defined as progress towards the reduction and eventual elimination of poverty, illiteracy, diseases, malnutrition and social inequality. Meeting the basic needs of all people became the new priority of development programmes which increasingly focused on the 'poorest of the poor'. Development activities shifted from urban to rural areas and reflected a commitment to the transfer of agricultural technology with the goal of increasing small-farm productivity (Blunt 1990:17).

- *Change*

"Change is a dynamic process of interaction, questions, answers, replies, re-information, reassurance, discussion and finally, hopefully, decision and action." (Eschenbach 1977:80).

- *Communication*

Communication is a dynamic process of interpreting ideas. Ideas are attached to information carriers (sounds, objects, smells, phenomena) which allow the exchange of ideas between people. In fact, anything can be used to communicate as long as people agree to its meaning. Communication is receiver-oriented. Unless the receiver interprets an information carrier produced by a sender, no communication takes place.

- *Communication process*

A communication process is made up of the following aspects:

Source: a person or object/entity that conveys an idea;
Receiver: a person for whom the message is intended;
Content: the idea that is being communicated;
Coding: linking an idea to an information carrier;
Decoding: interpreting an information carrier;
Objective: the intended effect to be achieved;
Medium: the type of carrier used to convey the idea;
Format: the way in which the idea is presented;
Context: the non-physical environment of communication;
Location: the physical environment in which communication takes place;
Time: the moment at which communication takes place;
Duration: the length of the communication event.

- *Conscientization*

Enabling people to develop a critical understanding of reality (see Freire revolution)

- *Culture*

A whole set of ideas and behavioural conventions which are shared by the members of a group, including its material products.

Culture constructs reality. It defines the things and phenomena in the surrounding world, categorizes them and gives them meaning. It determines how its members see their relationships to the environment, the supernatural and their fellow group members. It prescribes values and rules of conduct for its members which guides them in social interactions.

- *Development*

Development is a complex and multifaceted process which seeks to bring about the economic, socio-cultural, political and spiritual wellbeing of society. It has to be holistic. There can be no development of any kind if productivity and growth are neglected. At the same time, it has to be supported by a whole range of measures that will ensure equity, secure an enhanced quality of life, and guarantee human rights and democratic freedoms (Jayaweera 1987:80-81).

"True development is the unfolding of what lies hidden within the person or the community. What others can do, is at best to create an environment that stimulates development. Development can be nurtured, not generated" (Kindo 1987:8).

- *Development communication*

In the sense in which it was used by Lerner, Pye and Schramm it referred to technology-based communication networks which, regardless of message and content, tended to create, by reason of its inherent characteristics, a climate suited for development. It was supposed to generate the psychological ambience within which economic and productive activity occurred (Jayaweera 1987:xviii).

Today development communication is looked upon as a social process, designed to seek a common understanding or consensus among all the participants of a development initiative, leading to concerted action. The media are now seen as useful tools to help to bring about this process, and to assist in learning. Their use is not an end in itself, and interpersonal communication plays a major role (Balit 1988:7).

- *Development support communication*

A phrase coined by Erskine Childers of the UNDP. Development support communication is specifically designed to support a particular development programme. It is generally used in micro-situations, takes the form of campaigns and is generally terminated when the development project in question is completed. Because it is designed for specific purposes it is capable of being managed, overviewed and researched (Jayaweera 1987:76).

- *Diffusion of innovations*

In his book *Diffusion of Innovations*, Rogers (1962, first edition) presented his early theory about the diffusion of new ideas and practices as a crucial component of the modernization process. Important about this theory was the realization that mass communications are seldom sufficient to produce direct changes of attitudes or behaviour on their own. People are influenced in their decision-making by persons and groups with whom they are in direct contact. Furthermore, individuals are not equally exposed to the media, nor equally receptive to their messages. According to Rogers, the influence of mass communication seemed to operate by way of a 'two-step flow' process; the more aware (and often those with high status) members of groups tended to be most readily reached by the media, and these 'influentials' or 'opinion leaders', in turn, were instrumental in spreading the message to others.

- *Education*

Education in a very broad sense includes all situations in which people learn, with or without a teacher. It includes education at school and out-of-school, extension and training; what people learn from parents, peers and through experience. Through education, people are stimulated to learn the knowledge, skills, values and attitudes which they need in order to be successful in life. And, ideally, education develops curiosity and an eagerness to learn in such a way that people will continue to learn throughout their lives.

- *Evaluation*

Evaluation is the process by which the effectiveness of a programme or project is assessed. It is more than simply finding out what happened; it involves passing judgement on what happened. Was the outcome of the programme good enough? Was it better or worse than expected? Could more have been achieved? (Oakley 1985:114-15). Through evaluation one attempts to determine as systematically and objectively as possible the relevance, effectiveness and impact of activities in the light of their objectives, i.e. their aims and purposes (Raab 1987:4).

- *Extension*

Extension is an educational process which involves informing and teaching people, and changing human behaviour through communication. It has operational as well as educational dimensions. It requires competent institutions and effective mechanisms both for disseminating and for receiving information since extension needs to be 'demand' as well as 'supply' oriented (World Bank 1990).

- *Farming Systems Research (FSR)*

An extension approach which particularly focuses on the relevance of the extension message. In FSR, an interdisciplinary approach is employed and close ties between research and practice are advocated. The primary aim of FSR is to improve the wellbeing of individual agricultural families by increasing the yield of the farms while bearing in mind their limited resources and the conditions of their environment (Albrecht 1989). In FSR, researchers move closer to the field and try to work out feasible solutions in collaboration with farmers.

- *Freire revolution*

Freire has argued that education is usually conceived and practised as a form of 'banking' in which the teacher 'makes deposits' which the students patiently receive, memorise, and repeat'. This serves to increase the recipients' dependence upon the communicator and to perpetuate their oppressed condition. Freire suggests a 'liberating' or 'problem-posing' approach in which the status distance between teacher and student, communicator and audience, is abolished. Communication functions more as a dialogue in which the former learns as well as teaches, and the latter is enabled to understand better the causes of his oppression and thereby to do something about it. This is the process of 'conscientization'. Conceived originally in the context of adult education, its implications have not been lost on some in the communication field (Hartmann 1989:29).

- *Mass media*

Media which enable one to disseminate ideas to large audiences through technological/electronic means. They consist of all printed media (books, newspapers, magazines, posters, leaflets, wall charts, flip charts etc.), recordings, radio, television, film, filmstrips, slide-tape programmes, cassette and video programmes.

- *Monitoring*

Also called process evaluation, aimed at identifying any weaknesses and strengths in the implementation of programmes/projects in order to maximize efficiency and to make optimal use of available resources and facilities.

Usually descriptive in nature, process evaluation includes observation of the general reactions of members of the intended audience to specific project activities and project outputs (ASEAN 1981:23).

- *Participation*

Active involvement of the people in their own development programmes. According to Blunt (1990:19), participation must meet three basic requisites: it must allow the intended beneficiaries to make important decisions regarding their development; it must enable the people to contribute effectively to development efforts and it must enable the rural poor to share equitably in the benefits of development. Community participation requires, therefore, an appropriate devolution of authority to local agencies and institutes for the planning and management of development.

- *Perception*

"A process by which an individual selects, evaluates, and organizes stimuli from the external environment. Perceptions are the ways in which a person experiences the world" (Singer 1987:9).

- *Pre-testing*

Pre-testing (also called pilot testing) means testing the communication materials and teaching aids under field conditions with samples of the target audience. This pre-testing takes place before the materials are mass-produced or transmitted. One confronts representative members of the target audience with the materials to find out whether they accept, understand and like the messages and the way in which they are represented.

- *Signification*

A process of giving meaning to objects, phenomena, sounds and other sensory stimuli which act as carriers of ideas. When there is an arbitrary relationship between the information carrier and the idea it carries the sign is called a 'symbol'. When there is a relationship of imitation or resemblance between the information carrier and the idea it is called an 'icon'. There is a third category of relationship between the carrier and the idea, called 'index'. In this relationship the carrier 'points at' its meaning. A literal example of an index is when a person points at the object to which he refers.

- *Theatre for development*

Theatre for development is a special form of popular theatre within the field of adult education meant to be a community-focused problem-solving cultural intervention strategy, in which the process of creating a play is, educationally speaking, as valuable as the product of the performance (Epskamp 1992:232).

- *Training & Visit System*

The T&V system is an extension approach with a tightly structured work programme for extension agents based on a strict schedule of regular and frequent visits to selected 'contact' farmers; technical training and updating sessions for extension agents; a hierarchical organizational structure (with subject-matter specialists and supervisors to ensure quality and efficiency) and an exclusive devotion to extension work (Feder 1985:2). Under the system, contact farmers are expected to act as opinion leaders. They receive a continuous and regular flow of information from extension agents, which they are expected to convey to other farmers. In order to have an effect, T&V system should provide funding for appropriate numbers of extension staff at all levels and should ensure the mobility of extension agents. This way, it allows the extension officers to cover wider areas and a larger number of farmers.

- *Values*

Values consist of broad beliefs of central importance to which a strong emotional and moral worth is attached. Values serve as forceful guidelines to direct the thoughts, judgements and behaviour of members of a society.

Values are directly related to the way people see their relations to the environment, the supernatural and their fellow group members. Values determine how people consider the innate character of man, and how they define the purpose of human existence.

- *Visual literacy*

The capability of interpreting illustrations and photographs according to the pictorial conventions which have been used to represent reality or ideas. Pictorial conventions are used to suggest perspective and relative size, motion, the unseen, and ideas, and to focus the attention.

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